Afghanistan

Mortality Survey 2010

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This report presents findings of the Afghanistan Mortality Survey (AMS) 2010 which was carried out by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO) of Afghanistan. Technical assistance for the survey was provided by ICF Macro, the Indian Institute of Health Management Research (IIHMR), and the World Health Organization Regional Office for the Eastern Mediterranean (WHO/EMRO). The AMS 2010 is part of the worldwide MEASURE DHS project that assists countries in the collection of data to monitor and evaluate population, health, and nutrition programs. Financial support for the survey was received from the United States Agency for International Development (USAID) and the United Nations Children's Fund (UNICEF). WHO/EMRO's contribution to the survey was supported with funds from USAID and the UK Department for International Development and the Health Metrics Network (DFID/HMN).

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FOREWORD

The Afghanistan Mortality Survey (AMS) 2010 is the first nationwide survey of its kind. The survey which covers all 34 provinces of the country was designed to measure mortality levels and cause of death, with a special focus on maternal mortality. The information collected in the survey provides mortality trends by age and sex as well as estimates for sub-national, urban-rural and socioeconomic status. Furthermore, the survey provides current data on fertility, family planning and the extent of utilization of maternal and child health services.

The impetus for the fielding of a survey of this nature and magnitude came from the critical need for representative and reliable data on the general health status of the country in the wake of decades of war. It was felt that re-construction efforts will benefit from a baseline of information on basic demographic and health estimates for the country as a whole. More importantly, the survey was important for gauging the success of development efforts and years of multi-sectoral investment by international partners. This survey was completed in 87% of the country. However, the survey teams were unable to cover rural areas of Helmand, Kandahar and Zabul provinces for security reasons that account for 9% of the total population or one-third of the population of the south of Afghanistan. The insecurity compromised monitoring of field work especially in the South zone.

The survey was undertaken in close collaboration with key stakeholders in various sectors of the government, researchers, civil society organizations, and international organizations. The planning and implementation of the survey was carried out jointly by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO). Their commitment to the successful implementation of the survey is very much appreciated.

Our heartfelt appreciation goes to all the partners who directly or indirectly contributed to the survey effort. We wish to particularly thank the United States Agency for International Development (USAID), the World Health Organization (WHO) and the United Nations Children Fund (UNICEF) for their generosity in co-funding this survey, and acknowledge the valuable partnership between ICF Macro and the Indian Institute for Health Management Research (IIHMR) in providing technical and logistical support.

We are especially grateful to the field staff and other survey personnel for their courage and determination in conducting and monitoring fieldwork and ensuring its completion under extremely difficult and dangerous conditions. Most of all the survey would not have been a success without the active participation of thousands of Afghan men and women whom we thank for their hospitality in welcoming complete strangers into their households and for taking their time in answering the survey questions.

It is our hope that this report will be useful for results-oriented decision-making, and inform service delivery and promote advocacy in neglected sectors of the country. This report provides only a snapshot of the analysis that can be done with the data that have been collected. It is our sincere hope that researchers will deepen our understanding of the topics covered in the survey by undertaking further research with the survey dataset.

This survey reveals that substantial investment must be maintained to safeguard these hard-won gains in maternal and child health and to ensure continuity of overall achievements.

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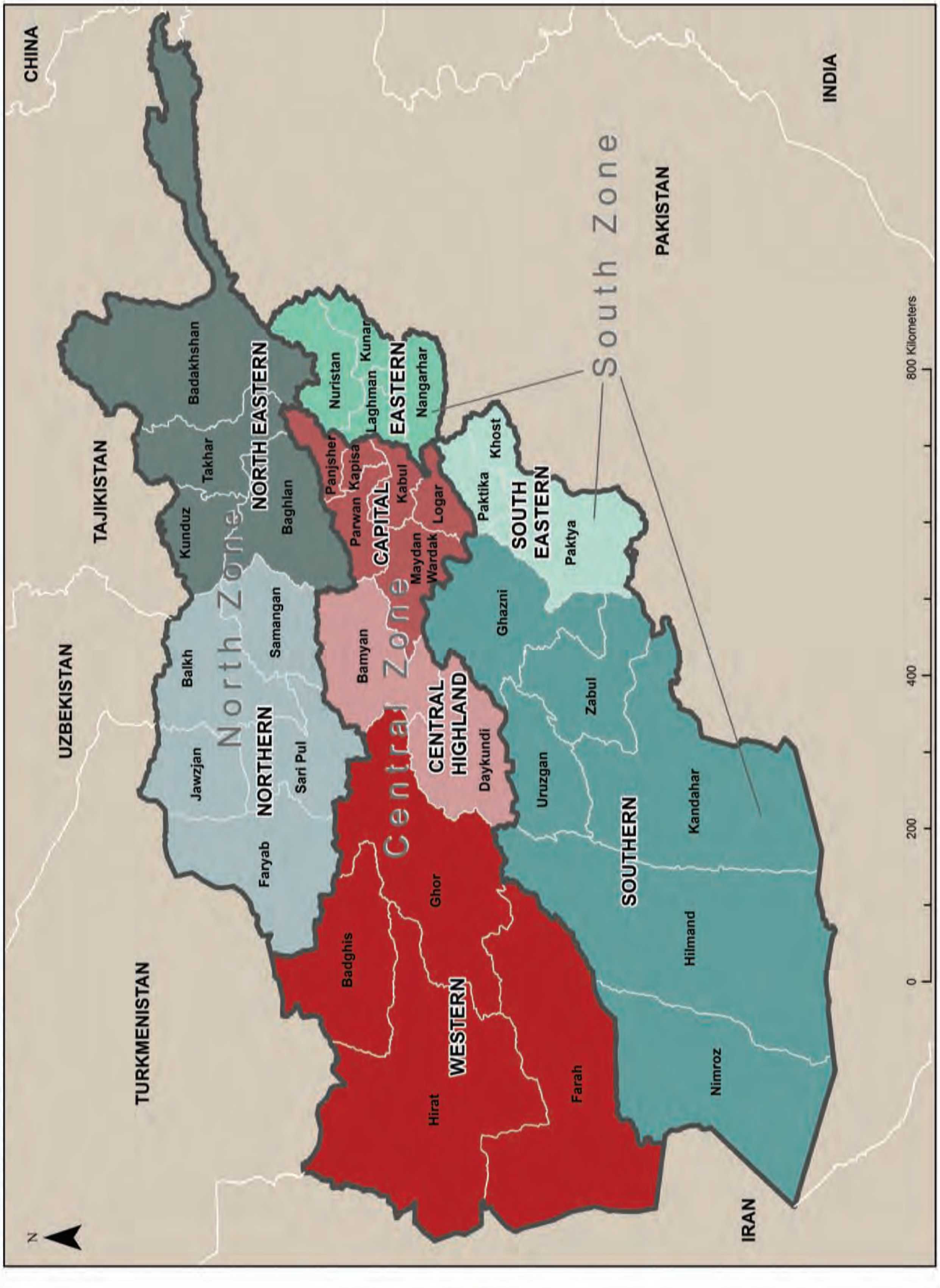
AFGHANISTAN



INTRODUCTION 1

1.1 GEOGRAPHY, HISTORY, AND ECONOMY

1.1.1 Geography

Afghanistan is a land-locked country in South-Central Asia, strategically located at the crossroads of major north-south and east-west trade routes. It occupies an area from latitude 29º 35'N to latitude 38º 40'N and longitude 60º 31'E to longitude 75º 00'E, with elevations ranging from 258 meters to 7,492 meters. The capital of the country is Kabul. The country is bounded by six different countries, namely, Pakistan, Iran, Tajikistan, Uzbekistan, Turkmenistan, and China. The longest country to border Afghanistan is Pakistan (at 2,430 kilometers), whereas the smallest is China (at 76 kilometers). Afghanistan stretches 1,240 kilometers from east to west and 565 kilometers from north to south. The total land area of the country is 652,290 square kilometers (Blood, 2001).

Topographically, Afghanistan is divided into three distinct ecological zones. The huge Hindu Kush mountain range divides the country into three very distinct geographic areas, with altitude, climate, and natural resources that vary greatly. These are the central highland, the southern plateau, and the northern plains. The central highland contains the infamous Khyber Pass, an area of high mountains and deep valleys. Seasons in this area range from blisteringly hot summers to bitterly cold winters. The topography ranges from semi-desert to grass steppe and hosts little in the way of vegetation. The southern plateau region consists of arid desert and high plateaus that are crisscrossed by several rivers. The climate of this area is mild and dry and contributes little towards the production of vegetation. The northern plains have fertile high plains and ridges, which create a pleasant climate of regular seasons and average rainfall. This area is known as the home of agriculture. Several large mountainous regions are found in this country, namely the Hindu Kush, the Pamir, and the Karakoram. The major rivers of the country are the Amu Darya (1,100 kilometers), Helmand (1,300 kilometers), Harirud (650 kilometers), and Kabul (460 kilometers) rivers.

For administrative purposes, Afghanistan is divided into eight development regions, namely the North Eastern, Northern, Western, Central Highland, Capital, Eastern, South-Eastern and Southern regions. Afghanistan is also divided into 34 provinces and 398 administrative districts. There are 15 large cities and 32 towns. Districts are further divided into smaller units called villages and municipalities.

1.1.2 History

The written history of Afghanistan can be traced back to 500 BC, although evidence suggests that an advanced degree of culture existed in the land between 3000 and 2000 BC (Library of Congress, 2008). In Afghanistan, prominent trade and migration routes converge from the Tigris-Euphrates Basin (via the Iranian Plateau), Indus Valley (through the passes over the Hindu Kush), Far East (via the Tarim Basin), and adjacent Eurasian Steppe. From the Middle Ages until around AD 1750, part of Afghanistan was recognized as Greater Khorasan. Two of the four main capitals of Khorasan, Balkh and Hirat, are now located in modern Afghanistan. The areas of Kandahar, Ghazni, and Kabul formed the frontier region between Khorasan and Hindustan.

Ahmad Shah Durrani was chosen as the head of state in 1747 following his conquest of the area that includes present-day Afghanistan and Pakistan, the Khorasan and Kohistan provinces of Iran, and the Delhi area of India. He is known as the founder of modern Afghanistan. An expanding British Empire collided with the Russian Empire in the 19th century, significantly influencing Afghanistan in what was termed "The Great Game," a rivalry for supremacy in Central Asia. British concern over Russian advances in Central Asia, and growing influence in Persia, culminated in "The Siege of Hirat," (1837-1838), and two Anglo-Afghan wars, in which the Persians, trying to retake Afghanistan and throw out the British and Russians, sent armies into the country to fight the British, mostly around and in the city of Hirat. The First Anglo-Afghan War (1839-1842) resulted in the destruction of a British army; it is remembered as an example of the ferocity of Afghan resistance to foreign rule. The Second Anglo-Afghan War (1878-1880) was sparked by Amir Shir Ali Khan of Afghanistan for his refusal to accept a British mission in Kabul. This conflict brought Amir Abdur Rahman to the Afghan throne. During his reign (1880-1901), the British and Russians officially established the boundaries of what would become modern Afghanistan. In commemoration of this event, Afghans celebrate August 19 as their Independence Day (Dupree et al., 2011).

King Amanullah Khan established diplomatic relations with most major countries and, following a 1927 tour of Europe and Turkey, introduced several reforms intended to modernize Afghanistan. He fought for Article 68 of Afghanistan's first constitution, which made elementary education compulsory. Some of the reforms that were actually put in place, such as the abolition of the traditional Muslim veil for women and the opening of a number of co-educational schools, quickly alienated many tribal and religious leaders. Faced with overwhelming armed opposition, Amanullah was forced to abdicate in January 1929 after Kabul fell to forces led by Habibullah Kalakani (Dupree et al., 2011).

Mohammed Zahir Shah was the last King (*Shah*) of Afghanistan, reigning for four decades, from 1933 until he was ousted by a coup in 1973. Zahir Shah was able to govern on his own in 1963 and despite the factionalism and political infighting a new constitution was introduced in 1964 which turned Afghanistan into a modern democratic state by introducing free elections, a parliament, civil rights, liberation for women and universal suffrage. In 1973, while Mohammed Zahir Shah was in Italy, his cousin and former Prime Minister Mohammed Daoud Khan staged a coup d'état and established a republican government (Dupree et al., 2011).

Mohammed Daoud Khan, who became prime minister in 1953, sought a closer relationship with the Soviet Union and a more distant one with Pakistan. However, disputes with Pakistan led to an economic crisis, and he was asked to resign in 1963. Amid charges of corruption and malfeasance against the royal family and poor economic conditions created by the severe 1971-1972 drought, Mohammed Daoud Khan again seized power in a nonviolent coup on July 17, 1973. He abolished the monarchy, abrogated the 1964 constitution, and declared Afghanistan a republic, with himself as its first president and prime minister. His attempts to carry out badly needed economic and social reforms met with little success, however, and the new constitution promulgated in February 1977 failed to quell chronic political instability (Dupree et al, 2011).

On April 27, 1978, the People's Democratic Party of Afghanistan (PDPA), led by Nur Mohammad Taraki, Babrak Karmal, and Hafizullah Amin, overthrew the government of Mohammad Daoud, who was assassinated with all of his family members in a bloody military coup. The coup became known as the Saur Revolution. Taraki became president, prime minister, and general secretary of the PDPA, and he then renamed the country the Democratic Republic of Afghanistan. The PDPA invited the Soviet Union to assist in modernizing the country's economic infrastructure, which included exploration and mining of rare minerals and natural gas. The Soviet Union also sent contractors to build roads, hospitals, and schools and to drill water wells; they also trained and equipped the Afghan army. However, the Marxist-Leninist ideology introduced by the Soviets was not well accepted throughout the country, which led to eventual unrest in 24 of the 28 Afghan provinces (Dupree et al, 2011).

After the fall of the communist regime of Najibullah in 1992, the Afghan political parties agreed on a peace and power-sharing agreement known as the Peshawar Accords. The Peshawar Accords created the Islamic State of Afghanistan and appointed an interim government for a transitional period. The resignation of President Najibullah from the Government of Afghanistan also saw the entrance of the Mujahideen groups into Kabul. However, between 1992 and 1996 peace was tenuous as Pakistan, Iran and Saudi Arabia sought to exert their influence in gaining a foothold in Afghanistan by funding local militias which let to fighting among multiple factions up until the Taliban entered the city in 1996, In this period a number of Afghans were killed, and most of Kabul city was destroyed (Dupree et al, 2011). The Taliban started shelling Kabul in early 1995, but they were defeated by forces of the Islamic State government under Ahmad Shah Massoud. For the first time in several months, Kabul civilians become the targets of rocket attacks and shelling aimed at residential areas in the city. On September 26, 1996, Massoud ordered a full retreat from Kabul as the Taliban prepared for another major offensive. The Taliban seized Kabul on September 27, 1996, and established the Islamic Emirate of Afghanistan (Physicians for Human Rights, 1998). In December 2001, after the Taliban government was toppled and the new Karzai Administration was formed, the International Security Assistance Force (ISAF) was established by the UN Security Council to help Afghanistan provide basic security.

In 2002, the Taliban began to regroup, and meanwhile more coalition troops entered the escalating war in Afghanistan against insurgents. Meanwhile, coalition forces from the North Atlantic Treaty Organization (NATO) assumed control of ISAF in 2003. The re-construction of Afghanistan began, funded by the international community and primarily by the United States Agency for International Development (USAID) and other US agencies. The European Union, Canada, and India also played a major role. The Afghan nation has been able to build democratic structures and to make some progress in key areas, such as health, economy, education, transport, agriculture, and construction. It has also modernized the fields of technology and banking. NATO is rebuilding and modernizing the military of Afghanistan as well as the Afghan National Police. Between 2002 and 2010, over five million Afghan refugees returned to their country, bringing with them new skills and capital. Still, Afghanistan remains one of the poorest countries in the world due to the impact of 30 years of war.

1.1.3 Economy

Since 2002, the economy of Afghanistan has improved significantly from an infusion of international assistance and investment as well as remittances from expatriates. This improvement is also attributed to its growing agricultural production and the end of a four-year drought in most parts of the country. Yet, Afghanistan remains one of the poorest and least developed countries in the world and depends heavily on foreign aid. As of 2010, the nation’s gross domestic product (GDP) at current prices was about US$17 billion; the GDP per capita at current prices was estimated at US$572 in 2010 (IMF, 2011).

About 36 percent of the country’s population is unemployed and lives below the poverty threshold. There are shortages of housing, clean drinking water, electricity, and employment (World Bank, 2010). The current administration, along with international donors, has remained committed to improving access to these basic necessities by prioritizing infrastructure development, education, housing, job creation, medical care, and economic reform. The replacement of opium production in Afghanistan, which probably makes up about one-third of the country’s GDP, is one of several areas to focus on for economic development over the long term.

The Afghan economy has always been based on agriculture, although only 12 percent of its total land is arable and less than 6 percent is currently cultivated. The agricultural sector accounts for about one-third of the country’s GDP and employs an estimated 80 percent of Afghans (GAIN, 2011). It is dependent on cereal, and primarily wheat cultivation, and other annual crop production which account for about 80 percent of agricultural production. Livestock production contributes 14 percent of agricultural GDP while fruit and nut production, which is widely expected to be the impetus for agricultural growth in the future, contributes 6 percent. Growth in the agricultural sector is highly dependent on erratic winter snows and spring rains for water. In 2009/10 the agricultural sector rebounded sharply from the severe drought in the previous year and grew by more than 20 percent. Growth is expected to be at about the same pace in the current year. Agricultural products, including carpets and rugs, contribute to 80 percent of the total licit exports. Dried fruits and nuts such as raisins, figs, almonds and pistachios are major exports. Raisins accounted for 21 percent of the total value of all agricultural exports, with almonds, pistachios and walnuts together representing 32 percent. The carpet and rug industry contributes another 36 percent to total agricultural exports. Major export destinations are Pakistan, India, Iran, Russia and Central Asian countries. The major agricultural imports into Afghanistan are food commodities, such as wheat and wheat flour, rice, sugar, vegetable oils, chicken and beef, and tea, which accounted for 18 percent of total imports. Other imports include motor vehicles, petroleum products and textiles. Growth in imports continues to outpace the growth in agricultural exports.

Afghanistan trades US$5 billion a year with other countries. In 1996, legal exports (excluding opium) were estimated at US$80 million, and imports were estimated at US$150 million per year. Since the collapse of the Taliban government in 2001, new trade relationships are emerging with the United States, Pakistan, Iran, Turkmenistan, the European Union, Japan, Uzbekistan, and India. Trade between Afghanistan and the United States is beginning to grow at a fast pace, currently reaching approximately US$500 million per year. Afghan rugs are one of the most popular exports from the country. Other products include hand-crafted antique replicas, precious and semiprecious stones, leather and furs (Dupree et al, 2011).

Afghanistan is endowed with a wealth of natural resources, including extensive deposits of natural gas, petroleum, coal, marble, gold, copper, barites, talc, sulfur, lead, zinc, iron ore, salt, and precious and semiprecious stones. According to a 2007 assessment, Afghanistan likely has significant amounts of undiscovered, nonfuel mineral resources. Geologists also found indications of abundant deposits of colored stones and gemstones, including emerald, ruby, sapphire, garnet, lapis, kunzite, tourmaline, and peridot. In 2010, US Pentagon officials working with American geologists discovered nearly $1 trillion in untapped mineral deposits in Afghanistan (Risen, 2010).

1.2 POPULATION

The Afghan government, with the support of the State University of New York (SUNY) and USAID, carried out in 1972-74 a demographic survey that used the most modern methods available (Country Studies, 2011). The survey reported a settled population of 10.2 million but was not representative of the entire country. The last official census of Afghanistan, carried out in 1979, registered a total population of 15,551,358. There is no other comprehensive population-based information that is collected systematically and scientifically in Afghanistan. Most population statistics rely on estimates and samples.

The 1979 Census estimated that more than 85 percent of the population lived in the rural areas and about 15 percent lived in the urban areas of the country (CSO, 1979). About half of the urban population lived in Kabul, the capital city. The nomadic population was estimated to be about 2.5 million. Due to the fragility of security, large-scale migration out of the country has been common. The majority of migrants have settled in Pakistan and Iran.

Afghanistan has an annual population growth rate of about 2.6 percent. The growth rate is 2.3 percent in rural areas and 4.7 percent in urban areas, reflecting migration to urban centers. The population of Afghanistan in 2010 was estimated at 29.7 million (IMF, 2011). The government of

Afghanistan, in cooperation with the international community, has tried since 2008 to initiate a population census. Because of the fluid security situation within the country, this has not been possible.

An anomaly in Afghanistan is the reporting of population by sex. Girls are underreported relative to boys in the younger age groups (below age 15) (Haub, 2009). A preference for sons is prevalent. Sex-selective abortion is not a likely cause for the underreporting of girls, especially given the lack of modern technology. Most likely, some girls are reported as boys because some stigma is attached to families who raise only girls, and as a result, the families may not wish to admit to their presence (Haub, 2009).

1.3 HEALTH POLICIES, STRATEGIES, AND STRUCTURE OF THE HEALTH CARE SYSTEM

1.3.1 Evolution of Health Policy and Strategy

The general health of the Afghan people remained poor in the 1970s because of the war. Poor health was exacerbated by inadequate water supplies, poor sanitation and hygiene practices, unstable security, lack of public policy on harmful products, unsafe drug use, danger in public places, uncontrolled waste disposal, air and noise pollution, and food insecurity. The very weak foundation of the public health system, threatened by constant war, made it even harder to deliver quality care to the general population.

Health sector reform has flourished in Afghanistan since the 1980s in response to increasing recognition of public sector inefficiencies in health care delivery. However, twenty years of unrest slowed implementation of health programs. An interim National Health Policy (NHP) and National Health Strategy (NHS) were developed during 2002-2004. This was followed by the development of the NHP 2005-2009 and the NHS 2005-2006. The European Commission (EC), USAID, and the World Bank (WB), together with the Ministry of Public Health (MoPH), made efforts to rehabilitate Afghanistan’s devastated health care system. A strategy to deliver a basic package of health services (BPHS) was developed in 2002 shortly after the establishment of the Transitional Islamic Republic of Afghanistan following the departure of the Taliban, when the country recorded some of the worst health statistics in the world (MoPH, 2005). The BPHS was adopted through various mechanisms, including performance-based partnership agreements (PPAs), within the framework of government health policy. This approach is premised on the notion that delivery of a BPHS to the majority of Afghans will address the major burden of disease and mortality through a set of sustainable, cost-effective interventions (Strong et al., 2005).

The BPHS includes cost-effective interventions aimed at addressing the principal health problems of the population, especially the most vulnerable groups—women and children. Provisions are also made to eventually incorporate interventions targeting other vulnerable groups. In 2003, the MoPH adopted a strategy of contracting out the delivery of basic health care services to nonstate providers so that it could concentrate fully on its role as a steward of the NHS. Under three different contracting mechanisms, underwritten by the WB, USAID, and the EC, each representing a different philosophical approach to the relationship among the host country government, donor, and population, the BPHS is currently being delivered by contract with nongovernmental organizations (NGOs) in 31 of the 34 provinces in Afghanistan. In the remaining three provinces, the MoPH is undertaking an experiment called the “Strengthening Mechanism,” by which it contracts with its own staff on the same terms as it contracts with NGOs. A key part of the strategic process that vastly enhanced the ability of the MoPH to manage many large NGO contracts was the establishment of the Grants and Contracts Management Unit (GCMU) in 2003. Situated within the MoPH, the GCMU has expanded rapidly with the BPHS, currently managing both technically and financially, in conjunction with the Ministry of Finance (MoF), about US$125 million worth of grants and contracts.

In 2005 the essential package of hospital services (EPHS) was modeled to complement the BPHS and delineate the hospital referral system necessary to support the BPHS (MoPH, 2005). The BPHS and EPHS represent clearly the content of the MoPH strategic program for service delivery.

1.3.2 Structure of the Health Care System

The BPHS is offered in four standard types of health facilities below the level of the provincial, regional, and national hospitals (MoPH, 2005). The four standard types of health facilities are the health post (HP), basic health center (BHC), comprehensive health center (CHC), and District Hospital (DH). These services include outreach by community health workers (CHWs) at HPs, outpatient care at BHCs, and inpatient services at CHCs and DHs. In addition, services are provided through health sub-centers (HSC) to bridge the gap between HPs and other BPHS levels of service delivery and mobile health teams (MHT).

Health Post (HP): At the community level, basic health care services are delivered by CHWs from their own homes, which function as community HPs. An HP, ideally staffed by one male and one female CHW, covers a catchment area of 1,000 to 1,500 people, which is equivalent to 100-150 families. CHWs offer limited curative care, including diagnosis and treatment of malaria, diarrhea, and acute respiratory infections such as pneumonia; distribution of condoms, oral contraceptives, and depot medroxy progesterone acetate (DMPA) injections; community DOTS; growth promotion and nutrition counseling; and micronutrient supplementation. CHWs are responsible for treating minor illnesses and conditions common in children and adults, for awareness-raising on disability and mental health, and for identification of persons with disabilities and mental conditions. The routine management of normal deliveries is not part of the CHW's job description, but female CHWs focus on promoting birth preparedness, safe home deliveries with a skilled birth attendant (when possible), awareness of the danger signs of pregnancy, the need for urgent referral when delivery complications occur, and basic essential newborn care.

Health Sub-Centers (HSC): The Health Sub-Center (HSC) is an intermediate health delivery facility to bridge the services gap between HPs and other BPHS levels of service delivery. The overall objective of establishing HSCs is to increase access to health services for underserved populations residing in remote areas. A HSC is intended to cover a population of about 3,000-7,000. The maximum walking distance to a HSC is two hours for the consumer of health services living in remote areas. The HSC provides most of the BPHS services that are available in BHCs including health education, immunization, antenatal care, family planning, TB case detection and referral, and follow up of TB cases in coordination with community DOTS. In addition, HSCs will be able to treat infectious diseases such as diarrhea and pneumonia. HSCs will refer severe and complicated cases to higher level facilities. The HSC is staffed by two technical staff (a male nurse and a community midwife), as well as a cleaner/guard.

Mobile Health Team (MHT): Another way to ensure access to basic health services in remote areas is the provision of health care services through mobile health teams. Mobile health services are an extension of BHC services; therefore, the services they provide are in most cases those recommended for a BHC. The MHT ideally has the following staff, male health provider (doctor or nurse), female health provider (community midwife or nurse), vaccinator and driver.

Basic Health Center (BHC): The BHC is a small facility that offers the same services as an HP but with more complex outpatient care. The BHC supervises the activities of the HPs in its catchment area. The services of the BHC cover a population of 15,000-30,000 people, depending on the local geographic conditions and the population density. In circumstances where the population is very isolated, the catchment population for a BHC can be less than 15,000. The minimal staffing requirements for a BHC are a nurse, a CHW, and two vaccinators. Depending on the scope of services provided and the workload of the BHC, up to two additional health care workers (HCWs) may need to be added to perform well-defined tasks (e.g., supervision of community health workers and outreach activities).

Comprehensive Health Center (CHC): The CHC covers a larger catchment area of 30,000-100,000 people, offering a wider range of services than the BHC. In addition to assisting normal deliveries, the CHC can handle certain complications, grave cases of childhood illness, treatment of complicated cases of malaria, and outpatient care for mental health patients. The facility has limited space for inpatient care but does have a laboratory. Staff of a CHC outnumber staff of a BHC and include both male and female doctors, male and female nurses, midwives, and laboratory and pharmacy technicians. Additionally, the CHC aims to provide maternal health care services, particularly comprehensive emergency obstetric care services.

District Hospital (DH): The DH handles all services in the BPHS, including the most complicated cases. The hospital is staffed with female obstetricians/gynecologists, a surgeon, an anesthetist, a pediatrician, midwives, laboratory and X-ray technicians, a pharmacist, a dentist, and a dental technician. Each DH covers an approximate population of 100,000 to 300,000 people dispersed in one to four districts.

Provincial Hospital (PH): The PH is the referral hospital for the Provincial Public Health (PPH) Care System. In essence, the PH differs little from a DH: it offers the same clinical services and possibly a few additional specialty services. In most cases, the PH is the final referral point for patients referred from the districts. In some instances, the PH can refer patients to higher levels of care in the regional hospital or to a specialty hospital (SH) in Kabul.

Regional Hospital (RgH): The RgH is primarily a referral hospital with a number of specialties for assessing, diagnosing, stabilizing and treating, or referring back to a lower-level hospital. The RgH provides professional inpatient and emergency services at a higher level than is available at DHs and PHs, yet the overall objective remains reduction of maternal mortality, infant mortality, and under-5 mortality as well as reduction in other diseases and conditions responsible for high mortality and morbidity.

National Hospitals (NH): NHs or SHs are referral centers for tertiary medical care and are located primarily in Kabul. They provide education and training for HCWs and act as referral hospitals for the PHs and RgHs.

As of 2011, there are 10,277 health posts, 468 health sub-centers, 807 basic health centers, 388 comprehensive health centers, 67 district hospitals, 29 provincial hospitals, 5 regional hospitals and 24 national hospitals throughout the country (MoPH, 2011).

Afghanistan’s health sector has made a remarkable recovery after years of war and neglect, and the impressive reduction in infant mortality rates counts among the country’s success stories since 2001 (UNDP/GIRoA, 2008). Output level indicators, such as the proportion of children immunized against measles, have seen impressive improvements in recent years. By the time of the last survey on child mortality, Afghanistan was four years ahead of the schedule set for the Millennium Development Goals (MDG) and on target to reduce under-5 mortality and three years ahead of the schedule set for the MDG on infant mortality reduction. Similarly, the rate of progress in measles vaccination has been faster than what had been projected when the Afghan MDG targets were set. If Afghanistan maintains the current rate of progress on measles vaccination, it is estimated that it could achieve full immunization status for newborn children as early as 2012 (UNDP/GIRoA, 2008).

Progress on maternal health is more difficult to assess because of the lack of up-to-date outcome-level data. Available figures show a mixed picture for the indicators listed in the revised Afghan MDG targets. On the one hand, it is noted that output level indicators, and the proportion of women receiving antenatal care, have progressed in pace with, or faster than, the projections set for the achievement of the Afghan MDGs. At the current rate of progress, it is estimated that Afghanistan could achieve its target on the number of births attended by skilled health personnel one year ahead of schedule. Similarly, Afghanistan has already surpassed the target it set for the number of women who would receive antenatal care in 2015, and if it maintains the current rate of progress, could achieve its 2020 target as early as 2012. These findings are consistent with the broader findings on progress in the health sector (UNDP/GIRoA, 2008).

1.4 Objectives of the Survey

The Afghanistan Mortality Survey (AMS) 2010 was designed to measure mortality levels and causes of death, with a special focus on maternal mortality. In addition, the data obtained in the survey can be used to derive mortality trends by age and sex as well as sub-national estimates. The study also provides current data on fertility and family planning behavior and on the utilization of maternal and child health services.

The specific objectives of the survey include the following:

- National estimates of maternal mortality; causes and determinants of mortality for adults, children, and infants by age, sex, and wealth status; and other key socioeconomic background variables;

- Estimates of indicators for the country as a whole, for the urban and the rural areas separately, and for each of the three survey domains of North, Central, and South, which were created by regrouping the eight geographic regions;

- Information on determinants of maternal health;

- Other demographic indicators, including life expectancy, crude birth and death rates, and fertility rates.

1.5 Organization of the Survey

The AMS 2010 was carried out by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO) Afghanistan. Technical assistance for the survey was provided by ICF Macro, the Indian Institute of Health Management Research (IIHMR) and the World Health Organization Regional Office for the Eastern Mediterranean (WHO/EMRO). The AMS 2010 is part of the worldwide MEASURE DHS project that assists countries in the collection of data to monitor and evaluate population, health, and nutrition programs. Financial support for the survey was received from USAID, and the United Nations Children's Fund (UNICEF). WHO/EMRO's contribution to the survey was supported with funds from USAID and the UK Department for International Development and the Health Metrics Network (DFID/HMN). Ethical approval for the survey was obtained from the institutional review boards at the MoPH, ICF Macro, IIHMR, and the WHO.

A steering committee was formed to coordinate, oversee, advise, and make decisions on all major aspects of the survey. The steering committee comprised representatives from various ministries and key stakeholders, including MoPH, CSO, USAID, ICF Macro, IIHMR, UNICEF, UNFPA, WHO, and local and international NGOs. A technical advisory group (TAG) made up of experts in the field of mortality and health was also formed to provide technical guidance throughout the survey, including reviewing the questionnaires, the tabulation plan for this final report, the final report, and the results of the survey. A complete list of names of persons involved in the AMS 2010 is provided in Appendix E and before Chapter 1.

1.6 Sample Design

The AMS 2010 is the first nationwide survey of its kind. A nationally representative sample of 24,032 households was selected. All women age 12-49 who were usual residents of the selected households or who slept in the households the night before the survey were eligible for the survey.

The survey was designed to produce representative estimates of indicators for the country as a whole, for the urban and the rural areas separately, and for each of the three survey domains, which are regroupings of the eight geographical regions. The compositions of the domains are given below:

- The North, which combines the Northern region and the North Eastern region, consists of nine provinces: Badakhshan, Baghlan, Balkh, Faryab, Jawzjan, Kunduz, Samangan, Sari Pul, and Takhar.

- The Central, which combines the Western region, the Central Highland region, and the Capital region, consists of 12 provinces: Badghis, Bamyan, Daykundi, Farah, Ghor, Hirat, Kabul, Kapisa, Logar, Panjsher, Parwan, and Maydan Wardak.

- The South, which combines the Southern region, the South Eastern region, and the Eastern region, consists of 13 provinces: Ghazni, Hilmand, Kandahar, Khost, Kunar, Laghman, Nangarhar, Nimroz, Nuristan, Paktika, Paktya, Uruzgan, and Zabul.

The sample for the AMS 2010 is a stratified sample selected in two stages from the 2011 Population and Housing Census (PHC) preparatory frame obtained from the Central Statistics Organization (CSO). Stratification was achieved by separating each domain into urban and rural areas. Because of the low urban proportion for most of the provinces, the combined urban areas of each domain form a single sampling stratum, which is the urban stratum of the domain. On the other hand, the rural areas of each domain are further split into strata according to province; that is, the rural areas of each province form a sampling stratum. In total, 34 sampling strata have been created after excluding the rural areas of Hilmand, Kandahar, and Zabul from the domain of the south. Among the 34 sampling strata, 3 are urban strata, and the remaining 31 are rural strata, which correspond with the total number of provinces and their rural areas. Samples were selected independently in each sampling stratum by a two-stage selection process. Implicit stratification and proportional allocation were achieved at each of the lower administrative levels within a sampling stratum, by sorting the sampling frame according to administrative units at different levels within each stratum, and by using a probability proportional to size selection at the first stage of sampling.

The primary sampling unit was the enumeration area (EA). After selection of the EA and before the main fieldwork, a household listing operation was carried out in the selected EAs to provide the most updated sampling frame for the selection of households in the second stage. The household listing operation consisted of (1) visiting each of the 751 selected EAs, (2) drawing a location map and a detailed sketch, and (3) recording on the household listing forms all structures found in the EA and all households residing in the structure with the address and the name of the household head. The resulting lists of households serve as the sampling frame for the selection of households at the second stage of sampling.

In the second stage of sampling, a fixed number of 32 households was selected randomly in each selected cluster by an equal probability systematic sampling technique. The household selection procedure was carried out at the IIHMR office in Kabul prior to the start of fieldwork. An Excel spreadsheet prepared by ICF Macro to facilitate the household selection was used. A level of non-response, or refusals on the part of households and individuals, had already been taken into consideration in the sample design and sample calculation. The survey interviewers interviewed only pre-selected households, and no replacements of pre-selected households were made during the fieldwork, thus maintaining the representativeness of the final results from the survey for the country. Interviewers were also trained to optimize their effort to identify selected households and to ensure that individuals cooperated to minimize non-response. It is important to note here that interviewers in the AMS were not remunerated according to the number of questionnaires completed but given a daily per diem for the number of days they spent in the field; in addition, it is also important to note that respondents were neither compensated in any way for agreeing to be interviewed nor coerced into completing an interview.

For security reasons, the rural areas of Kandahar, Hilmand, and Zabul, which constitute less than 9 percent of the population, were excluded during sample design from the sample selection; however, the urban areas of these provinces were included. Of the 751 EAs that were included in the sample, 34 EAs (5 urban and 29 rural) were not surveyed. Six of the selected EAs in Ghazni, 16 in Paktika, 1 in Uruzgan, 3 in Kandahar, 3 in Daykundi, and 2 in Faryab were not surveyed because of the security situation. In addition, two EAs from Badakshan and one from Takhar were not surveyed because base maps from the CSO were unavailable. The non-surveyed EAs—which were primarily in rural areas—represent 4 percent of the total population of the country, (Table 1.1). Overall, approximately 13 percent of the country was not surveyed; most of these areas were in the South zone. As shown in Table 1.1, the survey covered only 66 percent of the population in the South zone. Sample weights were adjusted accordingly to take into account those EAs that were selected but not completed for security or other reasons.

Table 1.1 Sample coverage

Percentage of the population represented by the sample surveyed in the Afghanistan Mortality Survey, Afghanistan 2010

	Urban	Rural	Total
North	97	98	98
Central	100	98	99
South	94	63	66
Total	98	84	87

Overall, the AMS 2010 covered 87 percent of the population of the country, 98 percent of the urban population and 84 percent of the rural population. Nevertheless, the lack of total coverage and the disproportionate exclusion of areas in the South, and particularly the rural South, should be taken into consideration when interpreting national level estimates of key demographic indicators and estimates for the South zone and regions within. For this reason key indicators will be presented for all Afghanistan and Afghanistan excluding the South zone. Despite these exclusions, the AMS is the most comprehensive mortality survey conducted in Afghanistan in the last few decades in terms of geographic coverage of the country.

Throughout this report, numbers in the tables reflect weighted numbers unless indicated otherwise. In most cases, percentages based on 25-49 cases are shown in parentheses and percentages based on fewer than 25 unweighted cases are suppressed and replaced with an asterisk, to caution readers when interpreting data that a percentage may not be statistically reliable. For child mortality rates, parentheses are used if based on 250-499 children exposed to the risk of mortality in any of the component rates, and suppressed if based on fewer than 250 children exposed to the risk of mortality in any of the component rates.

Gregorian calendar years are greater by approximately 621 years than the Afghan calendar years. However, the Afghan calendar years start in 1 Hammal which is approximately March 21 in the Gregorian calendar. Calculations in the tables are based on the Afghan calendar but in the report calendar years are presented in the Gregorian calendar with approximate reference to the Afghan calendar in parentheses.

1.7 QUESTIONNAIRES

Four questionnaires were administered in the AMS 2010: the Household Questionnaire, the Woman's Questionnaire, the Verbal Autopsy (VA) Questionnaire and a Cluster Level Questionnaire. These questionnaires were based on the DHS model questionnaires and WHO VAs adapted to reflect the population and health issues relevant to Afghanistan. They were finalized at a series of meetings with MoPH and stakeholders from other government ministries and agencies, NGOs, and international donors. The survey questionnaires were then translated from English into the two main local languages—Pashto and Dari—and back translated into English by persons not involved in the original translation to ensure that nothing was lost in the translation before being pretested. Following the pretest, the questionnaires were revised to take into account lessons learnt during the pretest.

The Household Questionnaire was used to list all the usual members and visitors in the selected households and to identify women who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The survival status of the parents was determined for all the listed members and visitors to the households. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for flooring, and ownership of various durable goods. Additionally, information pertaining to migration in the five years before the survey, household deaths for the same time frame, and health expenditures for inpatient and outpatient care were collected.[1]

The Woman's Questionnaire was used to collect information from all women age 12-49, on their age, education, ethnicity, marital status, and sibling history (whether alive or dead). Ever-married women were also asked about their pregnancy history, the number of children they had in their lifetime, and the survival status of their children. Ever-married women who had given birth in the five years preceding the survey were also asked questions on maternal health care for their most recent birth. Currently married women were additionally asked about their knowledge and use of family planning methods.

Each death that occurred in the selected households in the three years before the survey was followed up with one of three Verbal Autopsy Questionnaires, depending on the age at death: Form 1 for deaths to children 0-28 days; Form 2 for deaths to children 29 days-11 years; and Form 3 for deaths to adults age 12 years and above. An attempt was always made to interview the person(s) present at the time of death to ensure accurate information surrounding the circumstances that led to the death of the deceased.

The Cluster Level Questionnaire was used to gather information from the head of the village or some other knowledgeable informant, on access to basic amenities such as the presence of a cell phone signal, a paved road, a police station or post. In addition, information was collected on the largest medical facility, the highest level of school, and the frequency of public transport to and from the cluster. The questionnaire was also used to collect information on the availability of daily necessities, including petrol, vegetables, meats, bread, rice, and fuel for cooking.

1.8 LISTING, PRETEST, TRAINING, AND FIELDWORK

1.8.1 Listing

A listing operation was carried out in the selected clusters starting on March 27, 2010. For this purpose, training was conducted for 88 listers and cartographers from CSO who had been recruited from

[1] Data on health expenditures for inpatient and outpatient care was analyzed and reported in a separate document (MoPH GIRoA, 2011).

all regions to do the listing of households and delineation of EAs. A manual that described the listing procedure was prepared and translated into Dari, as a guideline. The training was conducted using classroom demonstrations and field practice, with support from ICF Macro and MoPH. The listing was performed by teams composed of one lister and one mapper. Five core team members were also assigned to perform quality checks.

At the end of the listing operations, out of the 751 clusters selected throughout the eight geographic regions and three zones, 719 were listed (with 2 of the listed clusters not surveyed).

1.8.2 Pretest

Prior to the start of the fieldwork, the questionnaires were pretested in both local languages, Dari and Pashto, to make sure that the questions were clear and could be understood by the respondents. A training of trainers was conducted by ICF Macro staff at MoPH for 35 participants over a two-week period from February 1-14, 2010. These trainees were recruited to conduct the pilot survey and to serve as trainers for the main training. The pilot survey was conducted in the two local languages from February 16-20, 2010, in three selected sites. The areas selected for the pretest were Estalif, Karte Parwan, and Karte Se from Kabul province which constituted rural, urban, and semi-urban households. Based on the findings of the pretest, the Household, Woman's, and Verbal Autopsy Questionnaires were further refined in the two local languages.

1.8.3 Training

The training of interviewers, editors, supervisors, quality control staff, and reserves was conducted from March 23, 2010, to April 17, 2010. The Dari and Pashto questionnaires were used during the training, and both versions were simultaneously checked against the English questionnaires to ensure accurate translation. In addition to classroom training, trainees did several days of field practice to gain more experience on interviewing in the two local languages and in fieldwork logistics.

In order to maintain uniform survey procedures, five manuals adapted from the core DHS manuals relating to different aspects of the survey were prepared in English and translated into Dari. The Interviewer's Manual discussed the objectives of the AMS, interviewing techniques, field procedures, general procedures for completing the questionnaires, and included a detailed discussion of the Household and Woman's Questionnaires. The Verbal Autopsy Manual discussed the process of conducting the verbal autopsy interviews and completing the verbal autopsy forms. The Supervisor's and Editor's Manual contained instructions on organizing and supervising fieldwork, maintaining and monitoring field control sheets, and general rules for editing completed questionnaires in the field. Trainers were given the Training Guidelines for DHS Surveys Manual, which described the administrative and logistical aspects of training and data quality checks using the field check tables. The Household Listing Manual described the mapping and household listing procedures used in DHS surveys.

A total of 174 trainees were trained in three classrooms. The trainees were selected from 367 initial applicants through interviews and written tests in Kabul, Hirat, Mazar-e-Sharif, Kunduz, and Jalalabad between March 10, 2010, and March 14, 2010. An additional 60 persons were nominated from the MoPH, provincial and other government officials. In each class, the training was conducted by one senior staff member of the MoPH who had been trained during the training of trainers. In addition, six other participants trained during the pretest helped the staff of MoPH conduct the training. Two guest speakers from MoPH were invited to discuss family planning and reproductive and child health in Afghanistan. The Safety and Security office of USAID provided a security briefing for all trainees and a specialized briefing for the supervisors and editors. Training of field staff was rigorous. The 3-week fulltime training consisted of instruction in general interviewing techniques and field procedures for the survey, a detailed review of the questionnaires, mock interviews between participants using the Dari and Pasto questionnaires, and practice interviews in the field. After the training on how to complete the Household, Woman's, and Verbal Autopsy Questionnaires was completed, all trainees were given written and oral tests to gauge their understanding of the AMS questionnaires and interviewing techniques. On the basis of the exam scores and overall performance in the classroom and during field practice, 140 trainees were selected to participate in the main fieldwork. From the group, 4 of the best trainees were selected as regional coordinators to monitor data quality, 25 of the best male trainees were selected as supervisors, and 19 of the best female interviewers were identified as field editors. The remaining 92 trainees were selected to be interviewers. The trainees not selected to participate in the fieldwork were kept as reserves in case of attrition. In order to minimize non-response, interviewers were clearly instructed to respect the cultural sensitivities of the country, with male interviewers conducting interviews with male respondents and female interviewers completing interviews with female respondents. The majority of respondents (97 percent) to the Household Questionnaire were male. Only women were administered the Woman's Questionnaire. One or more key informants who were present during the death of a person were respondents to the Verbal Autopsy Questionnaires and were either male or female or both. In cases where respondents to the verbal autopsy were male and female, both the male and female interviewers worked jointly in administering the Verbal Autopsy Questionnaires and recording the responses. In line with the local culture, a female field staff was always accompanied by a *maharam*, a close male relative, who was either a member of the team or just a companion to a female member of the team.

After completing the interviewers' training, supervisors and editors were trained for three additional days on how to supervise the fieldwork and edit questionnaires in the field in order to maintain data quality. The main duty of the field editor was to examine the completed questionnaires in the field and ensure that they were correctly filled out. An additional duty was to observe ongoing interviews in the field and verify the accuracy of the method of asking questions, recording answers, following skip instructions, and identifying eligible respondents. Supervisors were team leaders who ensured that the teams were in the correct cluster, who contacted the head of the village to inform them of the purpose of the survey and obtain their cooperation, and who ensured the general safety and well being of team members. Supervisors also maintained regular contact with the head office in Kabul, reported on the progress of fieldwork and alerted the head office of problems encountered in the field. The supervisors were also trained by a senior staff person from Roshan Clinic in Kabul on basic first aid, and they were provided certificates of completion. In addition, all fieldstaff were given a security briefing by the Safety and Security Liaison Office of USAID.

Apart from the main training, four additional training sessions were conducted for 28 males and 22 females in Kabul in the Pashto and Dari languages for fieldwork in the difficult and insecure provinces for which no trainee initially selected and trained had volunteered to go: 8 persons were trained from May 2-9, 2010 to work in Hirat and Badghis; 7 persons were trained from May 2-17 to work in Ghazni; 8 persons were trained from May 8-17 to work in Kandahar; and, 27 people were trained from August 20-31 to work in the provinces of Uruzgan, Paktika and in Ghazni to cater for attrition of the fieldstaff who had been trained earlier.

1.8.4 Fieldwork

Data collection began on April 20, 2010 with 25 teams initially deployed to complete the 100 clusters in Kabul province. This strategy helped ensure close supervision of all teams during the early phase of the survey before they left for provinces outside of Kabul province. Most teams were made up of two female interviewers, two male interviewers, a male supervisor, and a female field editor. In total, 32 teams involving 102 males and 82 females worked over a period of 8 months to complete fieldwork in all the provinces. Fieldwork was completed on December 31, 2010. Fieldwork supervision was coordinated by IIHMR, ICF Macro, and the MoPH; data quality was monitored in all the provinces through continuous supervision by four regional coordinators. Regular communication was also maintained through cell phones. Additionally, close contact between IIHMR and the field teams was maintained through field visits by senior staff, members of the steering committee, and ICF Macro. Field visits by IIHMR and ICF Macro staff were not possible in the southern, south eastern and south western provinces of the country due to the fluid security situation.

Several important procedures were put into place to ensure the quality of the data collected. The four regional coordinators reported directly to the survey manager and were pre-assigned to the regions they would closely monitor and the teams in each region. Regional coordinators spent most of the eight months of fieldwork in the field moving among their assigned teams. They facilitated the movement of teams to their assigned EAs, ensured that teams spent at least three days in each cluster to minimize non-response, checked completed questionnaires before they were sent to the central office, and addressed field concerns faced by teams. Coordinators carried out spot checks to ensure that teams were in the selected clusters, that no clusters were replaced, and that no households were replaced during the interview process. They monitored the work of supervisors and field editors to ensure that household heads were properly informed about the purpose of the survey, that no household member was coerced into completing an interview, that male interviewers interviewed male respondents, that female interviewers interviewed female respondents, that questionnaires were administered to each eligible respondent, and that all interviews were conducted in private.

A considerable amount of time was spent during training to discuss interviewing techniques and how to establish privacy during the interview process. Interviewers were strictly trained to discontinue an interview if privacy could not be established and to resume only if privacy was possible. Interviewers were also trained on how to physically position themselves right next to the respondent to minimize intrusion by another person, male or female, during the interview process. Supervisors were trained on how to find the assigned households and resolve any problems with assigned households. They were also trained to carry out spot checks to make sure that interviewers visited the assigned households and followed up with eligible respondents. Field editors were instructed to observe at least one interview per day to ensure that survey protocol was adhered to, to rotate the observation of interviews among each team member and edit all questionnaires while the team was in the cluster so that inconsistencies could be resolved prior to the team moving to the next cluster. The cover page of every questionnaire was signed by both the field editor and the supervisor to attest that they had checked and verified the content of the questionnaires.

1.9 DATA PROCESSING

The processing of the AMS 2010 data started on May 2, 2010. Completed questionnaires were returned periodically from the field to the IIHMR data processing center in Kabul, where they were entered and edited by 21 data processing personnel who were specially trained for this task. The data processing personnel included a supervisor, 5 office editors, and 15 data entry operators. There was 100 percent verification of data entry, that is, data for each questionnaire were entered twice by two separate data entry staff with a consistency check done to minimize data entry errors. Secondary editing was done following data entry to check for any errors or inconsistencies in the questionnaires. The concurrent processing of the data during fieldwork was an advantage because field check tables were generated early to monitor various data quality parameters. As a result, specific and ongoing feedback was given to the field teams to improve performance. Field check tables were run weekly and the results shared with MoPH, IIHMR and ICF Macro for review and follow-up action with teams in the field. The data entry and editing of the questionnaires was completed by January 15, 2011. ICF Macro provided technical support for data programming and processing.

1.10 RESPONSE RATES

Table 1.2 shows household and individual response rates for the AMS 2010. Non-response resulting from clusters not surveyed due to security and other reasons is not considered in this table. A total of 22,897 households were selected from the 717 completed clusters, of which 22,609 were found to be occupied during data collection. Of these occupied households, 22,351 were successfully interviewed, giving a household response rate of nearly 99 percent. In the selected households, 48,717 women were identified as eligible for the individual interview. Interviews were completed for 47,848 women, yielding an overall response rate of 98 percent. Response rates in urban areas (98 percent) were marginally lower than in rural areas (99 percent) for both households and eligible women. Response rates by zone and region are presented in Appendix Table A.1. The high response rates were due to several reasons: interviewers were instructed to make at least three callbacks, on different days and times, to complete an interview and minimize non-response; the vast majority of women were at home at the time of the survey; Afghans are hospitable people and were very welcoming of visitors into their homes. In addition, prior to the start of interviewing in a selected cluster, the village elder was contacted and the team leader explained the purpose of the survey and obtained his permission and cooperation to work in the cluster. In some instances, health workers from the selected clusters were called upon to assist with locating selected households. High household response rates were also recorded in the NRVA 2007/8 (91 percent), AHS 2006 (99 percent) and the MICS 2003 (99 percent).[2]

Table 1.2 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Afghanistan 2010

Result	Residence		
	Urban	Rural	Total
Household interviews			
Households selected	7,393	15,504	22,897
Households occupied	7,259	15,350	22,609
Households interviewed[1]	7,099	15,252	22,351
Household response rate	97.8	99.4	98.9
Interviews with women age 12-49			
Number of eligible women	15,318	33,399	48,717
Number of eligible women interviewed	14,936	32,912	47,848
Eligible women response rate[2]	97.5	98.5	98.2

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

1.11 PRIOR STUDIES

Wherever possible, results from the AMS 2010 are compared with results from a number of other surveys conducted in Afghanistan since 2003. Comparisons of the AMS 2010 data and data from other sources have to be interpreted with caution however, since the sample design, coverage and/or methodological approach to the estimation of key demographic and health indicators differ.

A brief description of the four principal surveys to which AMS results will be most frequently compared follows to assist in placing comparisons within their proper context.

[2] The AMS interviewed only pre-selected households with no replacements allowed. The NRVA 2007/8 recorded 91 percent response with households that were not found or that refused to be interviewed replaced from a pre-selected list of additional replacement households. It is unclear if a similar procedure was followed in the AHS 2006 or the MICS 2003.

National Risk and Vulnerability Assessment (NRVA) 2007/8. The NRVA was designed to provide representative data on key socioeconomic development indicators for Afghanistan, including 25 MDG indicators. The NRVA used the CSO pre-census household listing data to create a geographically ordered list of primary sampling units (PSUs), rural settlements and urban blocks with their estimated number of households from the 34 provinces and 11 urban centers (ICON-INSTITUTE, 2009). In addition, the NRVA 2007/8 sampled the Kuchi population or nomadic pastoralist population. The Kuchi population, considered one of the most vulnerable groups in the country, was not included in the CSO pre-census listing, which focused on the settled population; instead information from the National Multi-Sectoral Assessment for Kuchi (NMAK), which was conducted during the winter/spring of 2004 was used to determine the total size of the Kuchi population and to identify the summer locations from which the Kuchi population sample was drawn for the NRVA. Thus, national estimates of key indicators provided in the NRVA 2007/8 represent the situation among both settled and nomadic (Kuchi) populations.

Fieldwork for the NRVA 2007/8 started in mid-August 2007 and ended in mid-August 2008, a period of 12 months. The survey sampled 2,441 PSUs and 20,576 households of which 19,528 households were from the settled urban and rural population and 131 PSUs comprising 1,048 households from the Kuchi population.[3] The NRVA 2007/8 administered a 20-section Household Questionnaire with 14 sections administered by a male interviewer to the male head of the household and 6 sections by a female interviewer (in most parts of the country) to a female respondent. Two community-level questionnaires were also administered: one male and one female *Shura* questionnaire.

With respect to comparisons between the NVRA and AMS 2010 results, the major difference lies in the fact that the AMS 2010 did not separately sample the nomadic Kuchi population while the NVRA included an explicit Kuchi population domain. The implications of this on the overall comparability between the NRVA 2007/8 and the AMS 2010 is not clear as the updated sampling frame used in the AMS 2010 may have included a proportion of the Kuchi population which had since become a part of the settled population. To the extent that the Kuchi population may be underrepresented in the AMS 2010, there may be a positive bias in the AMS indicators although the bias is not likely to be large.

Afghanistan Health Survey (AHS) 2006. The AHS 2006 is a population-based rural survey designed to provide information on maternal and child health, child survival, family planning, health care utilization and related expenditures in Afghanistan. Sampling and selection in the AHS 2006 differed considerably from the AMS 2010 (JHBSPH and IIHMR, 2008).[4] A key difference is the fact that the AHS 2006 entirely excluded the six largest cities (Kabul, Hirat, Mazar-e-Sharif, Kunduz, Jalalabad and Kandahar) from its sample design. The AHS also excluded 5 of the 34 provinces in the country. The pre-census household listing conducted by the CSO between 2003 and 2005 that was used in the AHS 2006 also was not completed in all areas. The areas that were not covered included 17 districts mainly in Kandahar, Zabul and Hilmand, with one district missing from Ghazni and Hilmand. In addition, in one district in Daykundi, 26 villages were not enumerated (JHUBSPH and IIHMR, 2008). Finally, fieldwork was completed in only 397 clusters out of the 425 clusters selected for the AHS 2006; the remaining 28 clusters were not completed due to security reasons. The final sample included 8,278 households, with interviews of all ever-married women age 10-49, as well as interviews of primary caretakers of children 0-59 months. Data collection spanned three months from mid-September 2006 to mid-December 2006.

Because of the exclusion of major urban areas from the AHS, comparisons of the AMS 2010 data to the AHS 2006 data are limited to rural areas. The results from the AHS 2006 are representative of

[3] For a detailed description of the sample design and selection methodology, refer to the NRVA 2007/8 report (ICON-INSTITUTE, 2009) and the NRVA 2005 report (MRRD and CSO, 2007).
[4] For detailed description of the sampling methodology in the AHS 2006, refer to JHUBSPH and IIHMR, 2008: p.3-4.

72 percent of the rural population of the country. In comparison, the AMS 2010 covered 84 percent of the rural population.

Multiple Indicator Cluster Survey (MICS) 2003. The MICS 2003 is the first survey to be conducted in the country since decades of conflict and provides baseline data on key demographic and health indicators (CSO and UNICEF, 2004). The sampling frame for the 2003 MICS was derived from two sources: the 1979 Population Census conducted by CSO; and the National Immunization Day (NID) coverage data from the MoPH for Nuristan and the major cities due to the lack of a detailed breakdown of the population. The survey covered all 32 provinces in existence at that time in the country, and provides estimates of key indicators at the national, urban, rural and provincial levels. The Kuchi population is not covered in the sample as well as 10 percent of villages throughout the country for which census documents were missing. The survey sampled 765 PSUs, selected 21,038 households, and completed 20,806 households. Nevertheless, for various reasons, key findings from the MICS 2003 were considered flawed. A reanalysis of the data was carried out by CSO and UNICEF and modeled estimates of key indicators from the adjusted MICS 2003 data as well as from the 1997 and 2000 MICS[5] were published in the Best Estimates of Social Indicators for Children 1990-2005 (UNICEF, 2006).

Reproductive Age Mortality Survey (RAMOS) in Four Districts (2002). Bartlett and others carried out a study of women age 15–49 years who died between March 21, 1999, and March 21, 2002, in sampled villages in four selected districts in four provinces in Afghanistan (Bartlett et al., 2005). These districts were: Kabul city, Kabul province; Alisheng district, Laghman province; Maywand district, Kandahar province; and Ragh district, Badakshan province, with the selected sample representing less than 4 percent of the population of the country at that time. The districts were not selected randomly but were purposively selected to serve as proxies for urban, semirural, rural and very rural parts of the country, respectively. All 13,848 households in randomly selected villages in these four districts were surveyed and 294 deaths among women of reproductive age were investigated through verbal autopsy interviews of family members. Based on their findings of maternal deaths in these districts, the authors extrapolated the data to provide a national estimate of maternal mortality for the country.

[5] The 1997 MICS executed by the Centro Internacional de Enfermedades Tropicales (CIET) was never published (UNICEF, 2006). The 2000 MICS covered only the rural east of the country (UNICEF, 2006).

HOUSEHOLD POPULATION, HOUSEHOLD AND WOMEN'S CHARACTERISTICS 2

This chapter provides basic information on demographic and socioeconomic characteristics of the household population, as well as background characteristics of women interviewed with the Woman's Questionnaire. It also offers details on household facilities and assets, which help to identify major indicators of household status, such as the wealth quintile, as well as characteristics of the household population, such as age and sex. A household in the AMS 2010 is defined as a person or group of persons who live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as the head of the household, and who have common arrangements for cooking and eating.

The AMS 2010 collected information from all usual residents of a selected household (the *de jure* population) and from all persons who had stayed in the selected household the night before the interview (the *de facto* population). The difference between these two populations is very small, and all tables in this report refer to the de facto population unless otherwise specified.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

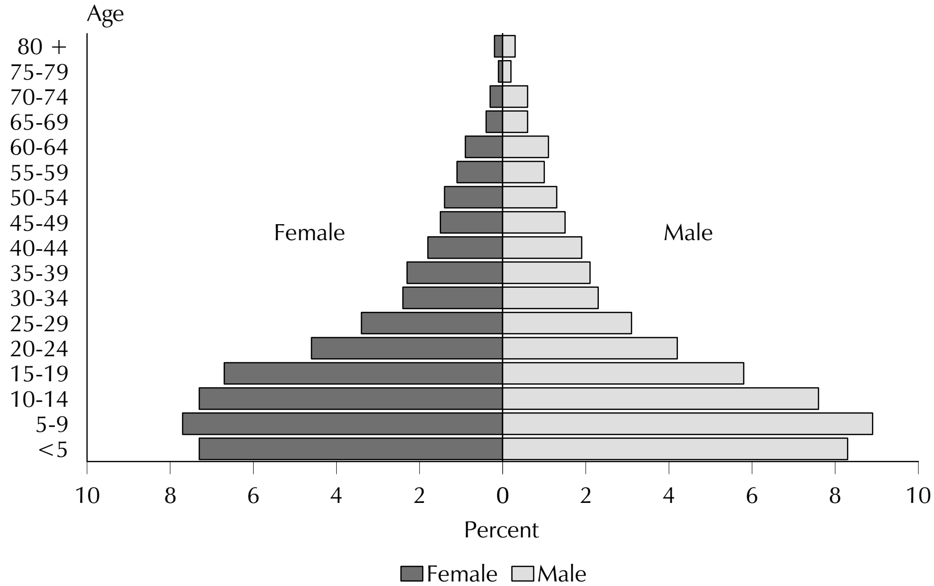
Table 2.1 shows the distribution of the de facto household population by age and sex, according to urban and rural residence. The AMS 2010 enumerated a total of 175,079 persons, with males outnumbering females at 51 percent. Because of relatively high fertility in the past, nearly half of Afghanistan's population (47 percent) is under age 15, and 16 percent is under age 5. Persons age 65 and older account for less than 3 percent of the total population (Figure 2.1). This finding is consistent with results from the 2007/8 NRVA, which indicated that 49 percent of the total population is less than age 15, some 20 percent is under age 5, and 3 percent is age 65 and older (ICON-INSTITUTE, 2009). There is a slightly smaller proportion of children under age 5 in urban areas, suggesting that recent declines in fertility are more evident in urban areas than in rural areas and that the transition to lower fertility began with the urban population.

Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Afghanistan 2010

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	15.7	13.9	14.8	16.4	15.1	15.8	16.3	14.9	15.6
5-9	15.9	15.0	15.5	18.0	15.7	16.9	17.6	15.6	16.6
10-14	14.0	14.3	14.1	15.2	14.8	15.0	14.9	14.7	14.8
15-19	12.8	14.0	13.4	11.1	13.5	12.3	11.5	13.6	12.5
20-24	9.2	9.8	9.5	8.1	9.2	8.6	8.3	9.3	8.8
25-29	6.2	7.2	6.7	6.1	6.9	6.5	6.1	7.0	6.5
30-34	5.0	5.1	5.1	4.5	4.8	4.6	4.6	4.8	4.7
35-39	4.4	5.0	4.7	4.0	4.7	4.4	4.1	4.7	4.4
40-44	3.5	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7
45-49	3.3	2.9	3.1	2.9	3.1	3.0	3.0	3.0	3.0
50-54	2.6	2.8	2.7	2.6	2.8	2.7	2.6	2.8	2.7
55-59	1.9	1.9	1.9	1.9	2.3	2.1	1.9	2.2	2.0
60-64	1.9	1.8	1.8	2.1	1.8	1.9	2.1	1.8	1.9
65-69	1.2	0.9	1.0	1.1	0.7	0.9	1.1	0.7	0.9
70-74	1.1	0.8	0.9	1.1	0.6	0.9	1.1	0.7	0.9
75-79	0.5	0.3	0.4	0.4	0.2	0.3	0.4	0.2	0.3
80+	0.7	0.4	0.6	0.6	0.3	0.4	0.6	0.3	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	17,514	17,295	34,809	71,285	68,985	140,270	88,799	86,280	175,079

Figure 2.1 Population Pyramid



AMS 2010

The overall sex ratio—the number of males per 100 females—is 103, suggesting slightly higher numbers of males than females. This ratio also suggests better reporting of the female population when compared with previous national estimates like that of the NRVA 2007/8, which indicated a sex ratio of 105 males per 100 females (ICON-INSTITUTE, 2009). The sex ratio differs slightly by residence. Urban areas have a lower sex ratio (101) than rural areas (103). It is also interesting to observe that from age 15 onwards females outnumber males until age 39; this pattern is more visible in rural than urban areas.

The quality of the data on age reporting can be assessed by looking at the single-year age distribution for the household population (Appendix Table C.1). In a population that reports its age correctly, each ending digit of age would be reported with approximately the same percent of persons, and since there are 10 digits 0 through 9, each would have 10 percent of the population. To the extent that certain digits contain more than 10 percent, they are preferred in the declaration of age and other digits with less than 10 percent are shunned to some extent. Digit preference usually occurs when a respondent does not know his/her exact age. Usually, ages ending in 0, 5 and to a lesser extent in 2 and 8 are preferred.

The table shows heaping at almost all ages ending in "0" or "5," indicating a clear-cut digit preference. The Myers' Index is a commonly used measure of overall digit preference calculated by taking the difference between the actual distribution of ages according to last digit (0 to 9) and subtracting from 10 percent, and then summing the absolute values of these deviations.[1]

The values of the Myers' Index vary from 0, indicating no preference, to 90 indicating complete preference for a single digit. Appendix Table C.2 shows that there is a large preference for ages ending in 0 and 5 with deviations from 10 percent of 9.0 and 5.3, respectively, indicating that 19 and 15 percent of persons were reported with ages ending in 0 and 5, respectively. The Myer's Index has a total deviation of 34 percent for all digits combined, indicating that 17 percent of the population had their ages misreported. Atypically, there is no obvious heaping at ages 5 or 15, which end in the usually preferred digit 5. Heaping at age five can also occur due to eligibility in a child health section, which was not included in

[1] In the calculation of the index, a "blended population" is used to eliminate a slight apparent preference for lower digits due to the age structure of a growing population.

the AMS 2010. Heaping on this age can distort estimates of infant and child mortality, which are usually calculated for the period 0-4 years prior to the survey. However, in the AMS 2010 the typical pattern of heaping at age 12 is evident.

2.2 HOUSEHOLD COMPOSITION

Table 2.2 presents information on the household composition. The majority (97 percent) of households are headed by men, although the proportion of female-headed households is slightly higher in urban areas (4 percent) than in rural areas (3 percent) in the country. The mean household size for the country is 7.8 persons per household with a small difference between urban and rural areas. Table 2.2 also shows the percentage of households with children under age 18 with one parent dead (single orphans) or both parents dead (double orphans). The percentage of households with single orphans is substantially higher (8 percent) than the percentage of households with double orphans (1 percent).

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans under age 18, according to residence, Afghanistan 2010

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	96.4	96.8	96.7
Female	3.6	3.2	3.3
Total	100.0	100.0	100.0
Number of usual members			
1	0.3	0.3	0.3
2	2.4	2.8	2.7
3	5.1	4.7	4.8
4	8.3	7.7	7.8
5	10.9	9.3	9.6
6	12.8	12.2	12.3
7	14.2	12.8	13.1
8	12.3	12.6	12.5
9+	33.4	37.6	36.8
Total	100.0	100.0	100.0
Mean size of households	7.6	7.9	7.8
Double orphans	0.8	1.3	1.2
Single orphans	7.4	7.8	7.7
Number of households	4,548	17,803	22,351

Note: Table is based on de jure household members (i.e., usual residents). Total may not add up to 100.0 due to rounding.

Table 2.3 provides additional information on children's orphanhood. The data show that orphanhood in Afghanistan increases with children's age. Eleven percent of children age 15-17 have either lost their father or mother or both parents. To the contrary, only 1 percent of children under age 2 have lost one or both parents. Interestingly, the percentage of single or double orphans does not vary between urban and rural areas of the country but does vary slightly by zone and region. Six percent of children are orphans in the North zone compared with 4 percent in the South zone. Seven percent each of children from the North Eastern and Central Highland regions have lost one or both parents. On the other hand, only 3 percent each of children in the Eastern and South Eastern regions have lost one or both parents. Seven percent of children living in the poorest households have lost one or both parents, whereas 4 percent of children living in the wealthiest households have lost one or both parents.

Table 2.3 Children's orphanhood status

The percentage of children under 18 with one or both parents dead, according to background characteristics, Afghanistan 2010

Background characteristic	Percentage with one or both parents dead	Number of children
Age		
0-4	1.3	27,210
<2	0.9	9,332
2-4	1.5	17,878
5-9	3.2	29,131
10-14	6.8	26,048
15-17	11.4	13,354
Sex		
Male	4.5	49,598
Female	5.0	46,144
Residence		
Urban	4.7	18,237
Rural	4.8	77,506
Zone		
North	6.0	28,895
Central	5.0	33,867
South	3.5	32,981
Region		
North Eastern	6.6	14,595
Northern	5.3	14,300
Western	5.4	12,012
Central Highland	6.6	3,457
Capital	4.5	18,398
Eastern	3.1	17,195
Southern	5.0	6,752
South Eastern	2.9	9,034
Wealth quintile		
Lowest	6.9	19,382
Second	5.1	19,015
Middle	4.3	19,436
Fourth	4.0	19,623
Highest	3.6	18,286
Total <15	3.7	82,389
Total <18	4.8	95,742

Note: Table is based on de jure members (i.e., usual residents).

2.3 HOUSEHOLD CHARACTERISTICS

Information on access to electricity, source of drinking water, type of sanitation facility in the household, main flooring material, and sleeping space are physical characteristics of a household that are used to assess the general well-being and socioeconomic status of household members.

Data on household drinking water for households and de jure household members are presented in Table 2.4. In total, 54 percent of households obtain drinking water from an improved source, that is, water that is protected from potentially contaminated runoff. This differs considerably from similar data reported in the 2007/8 NRVA report, which indicated that 28 percent (27 percent if Kuchis are included) of households in the country had access to an improved source of drinking water. It is possible that this trend may not solely reflect improvements in access to safe water but instead may be due in part to differences between the two surveys in the way the questions on safe drinking water were asked; the definition of improved versus non-improved water sources; the way in which the estimates were calculated; or, the time period associated with access to safe drinking water. However, there is collaborative evidence that the successful implementation of the community-based National Solidarity Program (NSP) by the Ministry of Rural Rehabilitation and Development (MRRD) which has invested large amounts of funds to support water and sanitation, has resulted in a marked improvement and widespread access to safe drinking water in the past few years (MRRD, 2011).[2]

Not surprisingly, households in urban areas have greater access to an improved source of drinking water than households in rural areas (77 percent compared with 49 percent). The most common source of drinking water in both urban and rural areas is a tube well or borehole, with about three in ten households in urban areas and two in ten households in rural areas using this source. Urban households are also more likely than rural households to have drinking water piped into their dwelling, yard, or plot (23 percent versus 3 percent). More than two-fifths of households (42 percent) are accessing drinking water from a non-improved source. Almost half (49 percent) of rural households and one-sixth (18 percent) of urban households obtain drinking water from a non-improved source. The two major non-improved sources of drinking water in rural areas are unprotected dug well (19 percent) and surface water (17 percent). One-tenth of urban households are also using unprotected dug wells as their main source of drinking water.

Table 2.4 Household drinking water

Percent distribution of households and de jure population by source of drinking water, according to residence, Afghanistan 2010

Source of drinking water	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Improved source	**77.2**	**48.5**	**54.4**	**77.8**	**50.2**	**55.6**
Piped water into dwelling/ yard/plot	22.5	2.5	6.6	21.8	2.6	6.4
Public tap/standpipe	7.3	5.0	5.5	7.1	4.6	5.1
Tube well or borehole	29.3	18.5	20.7	31.1	20.6	22.7
Protected dug well	17.4	14.0	14.7	17.1	14.2	14.7
Protected spring	0.7	7.7	6.3	0.7	7.5	6.1
Rainwater	0.0	0.8	0.6	0.0	0.7	0.6
Non-improved source	**17.9**	**48.6**	**42.3**	**17.6**	**46.4**	**40.7**
Unprotected dug well	9.9	18.6	16.8	9.5	18.5	16.7
Unprotected spring	1.1	11.5	9.4	1.1	10.8	8.8
Tanker truck/cart with small tank	3.9	0.9	1.5	4.0	0.9	1.5
Surface water	3.0	17.2	14.3	3.0	15.9	13.3
Bottled water	0.1	0.4	0.3	0.1	0.4	0.3
Other	4.8	2.8	3.2	4.5	3.2	3.5
Missing	0.1	0.1	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,548	17,803	22,351	34,788	140,650	175,438

[2] Although this program was initially launched in September 2003, it has since gained momentum and widespread success. The program is currently in its third phase and has reached 361 districts and every province, with nearly 70 percent of rural communities mobilized to participate in this community-driven rural reconstruction and development (MRRD, 2011).

Table 2.5 presents information on household sanitation facilities of the de jure population. About 20 percent of households have an improved toilet facility, while 81 percent have a non-improved toilet facility. One in five households does not have any toilet facility. Data from the NRVA 2007/8 indicate that only 5 percent of households in Afghanistan had improved sanitation facilities. As mentioned earlier the increase in the percentage of households with improved sanitation facilities between the fielding of the NRVA 2007/8 and the AMS 2010 could be attributed to the vast investment in the NSP by the MRRD and its successful implementation in the last few years.

Not surprisingly, twice as many households in urban areas as in rural areas have access to improved toilet facilities. Thirty-two percent of urban households shared their toilet with other households compared with 12 percent of rural households. Eighty-four percent of rural households have a non-improved facility, while one-quarter of rural households have no toilet facility at all.

Table 2.5 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Afghanistan 2010

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility	**33.2**	**16.0**	**19.5**	**33.4**	**15.9**	**19.4**
Flush/pour flush to piped sewer system	2.1	0.0	0.4	1.9	0.0	0.4
Flush/pour flush to septic tank	9.5	0.5	2.3	9.7	0.5	2.3
Flush/pour flush to pit latrine	2.9	1.7	1.9	2.9	2.0	2.2
Ventilated improved pit (VIP) latrine	5.7	3.5	4.0	5.8	3.6	4.0
Pit latrine with slab	13.1	10.2	10.8	13.2	9.8	10.5
Non-improved facility	**66.8**	**84.0**	**80.5**	**66.6**	**84.1**	**80.6**
Any facility shared with other households	32.1	12.0	16.1	32.0	12.7	16.6
Flush/pour flush not to sewer/septic tank/ pit latrine	3.0	0.4	0.9	3.4	0.4	1.0
Pit latrine without slab/open pit	28.7	44.6	41.3	28.0	44.2	41.0
No facility/bush/field	1.1	25.2	20.3	1.1	24.8	20.1
Other	0.3	0.3	0.3	0.4	0.3	0.3
Missing	1.5	1.6	1.6	1.7	1.5	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,548	17,803	22,351	34,788	140,650	175,438

Table 2.6 shows data on the availability of electricity, type of flooring material, and number of rooms used for sleeping. The table shows that less than half (43 percent) of the households in Afghanistan has access to electricity. The NRVA 2007/8 reported a similar percentage (42 percent). Access to electricity varies markedly between urban areas (83 percent) and rural areas (32 percent).

About three in five households use mud and hay as the main flooring material. These materials are more common in rural than in urban areas. About one-third (32 percent) of urban households use cement as the main flooring material. Another 18 percent of urban households use carpet.

Crowding and poor living conditions directly affect the health of household members. The AMS 2010 included a question on the number of rooms used for sleeping to determine the extent of crowding in Afghanistan. More than one-fifth of households have only one room for sleeping (22 percent), one-third (37 percent) of households have two rooms, and nearly two-fifths (41 percent) have three or more rooms for sleeping.

Table 2.6 Household characteristics

Percent distribution of households and de jure population by housing characteristics, according to residence, Afghanistan 2010

Housing characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	82.8	32.4	42.7	82.9	31.9	42.0
No	17.1	67.4	57.2	17.0	67.9	57.8
Missing	0.1	0.2	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth/sand	0.8	4.0	3.3	0.7	4.7	3.9
Dung	0.1	0.2	0.2	0.1	0.2	0.1
Mud and hay	37.1	62.5	57.3	35.5	57.7	53.3
Wood planks	0.1	0.1	0.1	0.1	0.2	0.1
Parquet, polished wood	0.1	0.1	0.1	0.1	0.1	0.1
Vinyl or plastic strips	3.4	14.8	12.5	3.8	16.6	14.0
Ceramic tiles	0.8	0.2	0.4	0.8	0.3	0.4
Cement	31.6	3.1	8.9	31.0	3.3	8.8
Carpet	18.2	8.6	10.6	19.7	9.8	11.7
Other	7.6	6.2	6.5	8.1	7.2	7.4
Missing	0.1	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	24.7	20.9	21.6	18.1	14.9	15.6
Two	35.2	37.2	36.8	32.8	33.3	33.2
Three or more	38.3	41.5	40.9	47.5	51.3	50.5
Missing	1.7	0.5	0.7	1.6	0.5	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	4,548	17,803	22,351	34,788	140,650	175,438

2.4 HOUSEHOLD POSSESSIONS

Table 2.7 shows the percentage of households possessing various durable goods and means of transportation, by residence. Information on the ownership of durable goods and other possessions reflects the socioeconomic status of the households. Radio is a very common possession in most households, with 72 percent of households in urban areas and 60 percent of households in rural areas owning one. Slightly more than one-third of households have a television, which is considered a luxury item and which is found predominantly in urban households (84 percent). This is a reflection on the availability of electricity (Table 2.6). Overall, 71 percent of households in Afghanistan have a mobile telephone, but only 2 percent have a non-mobile (landline) telephone, with urban households being much more likely to own either type of phone. The majority (92 percent) of households in urban areas and two-thirds of households in rural areas (66 percent) have a mobile telephone. About 8 percent of households have a refrigerator. More than half (55 percent) of urban households have a stand fan, compared with 9 percent of rural households. Most households in both urban and rural areas have a mattress (96 percent). Two-fifths of households have an *almirah* or cabinet, with urban households being twice as likely as rural households to own one.

Table 2.7 Household possessions

Percentage of households and de jure population possessing various household effects, means of transportation, agricultural land, and livestock/farm animals, by residence, Afghanistan 2010

Possession	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Household effects						
Radio	72.4	59.9	62.5	74.0	64.0	66.0
Television	84.1	20.8	33.7	84.7	21.1	33.8
Mobile telephone	91.8	65.8	71.1	93.1	69.6	74.3
Non-mobile telephone	5.8	0.7	1.7	5.7	0.7	1.7
Stand fan	54.8	8.7	18.1	57.0	9.4	18.8
Mattress	97.3	95.4	95.8	97.6	95.8	96.2
Cabinet/almirah	66.2	34.1	40.7	68.8	37.9	44.0
Generator	20.1	7.5	10.1	22.8	9.2	11.9
Refrigerator	30.0	2.2	7.9	30.9	2.3	8.0
Means of transport						
Bicycle	39.8	26.9	29.5	43.1	31.0	33.4
Tractor	0.9	3.7	3.1	1.1	5.0	4.3
Motorcycle/scooter	15.5	24.3	22.5	17.5	26.4	24.6
Animal-drawn cart	1.1	1.3	1.2	1.2	1.7	1.6
Car/truck	18.3	8.5	10.5	21.6	11.2	13.2
Rickshaw	1.8	1.1	1.3	2.0	1.3	1.5
Ownership of agricultural land	25.2	68.6	59.8	28.0	71.4	62.8
Ownership of farm animals[1]	19.8	79.4	67.3	22.2	82.7	70.7
Number	4,548	17,803	22,351	34,788	140,650	175,438

[1] Cattle, cows, bulls, horses, donkeys, mules, camels, goats, sheep, or chickens

The most common means of transport in the country is a bicycle (30 percent), followed by a motorcycle or scooter (23 percent), and a car or truck (11 percent). Bicycles and cars/trucks are more common in urban than in rural areas, and the motorcycle/scooter is most common in rural areas. Three-fifths (60 percent) of households in the country own agricultural land, and two-thirds (67 percent) own farm animals. Ownership of agricultural land is nearly three times higher, and ownership of farm animals is four times higher in rural areas than in urban areas.

2.5 SOCIOECONOMIC STATUS INDEX

One of the background characteristics used throughout this report is an index of socioeconomic status. The economic index used in this study was developed and tested in a large number of countries in relation to inequalities in household income, use of health services, and health outcomes (Rutstein et al., 2000). It is an indicator of the level of wealth that is consistent with expenditure and income measures (Rutstein, 1999). The economic index was constructed using household asset data, including ownership of a number of consumer items ranging from a television to a bicycle or car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of material used for flooring.

Each asset was assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardized in relation to a normal distribution with a mean of zero and standard deviation of one (Gwatkin et al., 2000). Each household was then assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the score of the household in which they resided. The sample was then divided into quintiles that ranged from one (lowest) to five (highest). This classification of population by quintiles is used as a background variable in the following sections to assess the demographic and health outcomes in relation to socioeconomic status.

Table 2.8 presents the wealth quintiles by residence and region. The majority of the population residing in urban areas (68 percent) falls in the richest quintile. Among the three zones, households in the Central zone are more likely to fall in the highest wealth quintile than households living in the South and North zones. The population residing in the Central Highland region is poorest, with 98 percent falling in the lowest and second lowest wealth quintiles.

Table 2.8 Wealth quintiles

Percent distribution of the jure population by wealth quintiles, according to residence, zone, and region, Afghanistan 2010

Residence/region	Wealth quintile					Total	Number of population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Urban	2.0	3.7	7.9	18.0	68.3	100.0	34,788
Rural	24.4	24.0	23.0	20.5	8.0	100.0	140,650
Zone							
North	38.8	29.3	15.4	6.9	9.7	100.0	53,862
Central	21.6	20.7	14.7	16.1	27.0	100.0	62,668
South	1.1	10.8	29.8	36.2	22.0	100.0	58,908
Region							
North Eastern	41.6	28.0	17.3	7.5	5.7	100.0	26,300
Northern	36.1	30.5	13.6	6.3	13.5	100.0	27,562
Western	37.0	25.1	11.4	9.9	16.6	100.0	21,982
Central Highland	62.8	35.0	1.7	0.5	0.0	100.0	5,974
Capital	4.7	15.5	19.0	22.6	38.2	100.0	34,712
Eastern	1.1	12.1	32.3	37.6	16.9	100.0	30,312
Southern	2.3	15.0	25.3	22.9	34.4	100.0	12,656
South Eastern	0.3	5.0	28.6	44.2	22.0	100.0	15,940
Total	20.0	20.0	20.0	20.0	20.0	100.0	175,438

2.6 REMOTENESS INDEX

The remoteness index is a background characteristic that is used mainly with mortality indicators to compare death rates by the remoteness of the location in which the death occurred. Significant differences provide empirical evidence to support the hypothesis that premature deaths, including maternal mortality, occur disproportionately in remote areas that, by definition, may lack a certain level of infrastructure to support services. The term *remoteness* implies lack of infrastructure and/or distance from service centers.[3]

The construction of the index uses methodology similar to that used to generate the wealth index, except information is captured at the cluster level instead of at the household level. The cluster-level information was captured through a series of country-specific questions asked of a village leader or other knowledgeable person and responses believed to be related to the degree of remoteness, including whether there is a cell phone signal in the center of the cluster, a paved road into the cluster, and a police station or post in the cluster. In addition, information was also collected for each cluster on the presence of the highest medical facility, highest level of school, and the frequency of public transport to and from the cluster. Finally, the availability of daily necessities, including petrol, vegetables, meats, bread, rice, and fuel for cooking, was recorded. Like the wealth index, each of these cluster attributes was assigned a weight (factor score) generated through principal component analysis, and the resulting remoteness scores were standardized in relation to a standard normal distribution, with a mean of zero and a standard deviation of one (Gwatkin et al., 2000). Each cluster was then assigned a score for each attribute of

[3] The remoteness index may be correlated with the wealth index, and the degree to which there is correlation may be informative for further use—or abandonment—of this contextual indicator. That is, if the remoteness index measures a concept independent of the wealth index, then it may have some untapped explanatory power for variability in service utilization and coverage, or other events of interest.

remoteness, and the scores were summed for each cluster. Individuals were ranked according to the total score of the cluster in which they resided. The sample was then divided into quintiles from most remote (lowest) to least remote (highest). A single remoteness index was developed on the basis of data from the entire country sample, and this index was used in all the tabulations presented with remoteness as a background characteristic. Table 2.9 shows the distribution of the population into five levels based on the remoteness index, by residence. These distributions indicate the degree to which people live in remote areas and whether remoteness is evenly (or unevenly) distributed by geographic areas.

Table 2.9 shows that 28 percent of the rural population and 14 percent of the urban population live in the most remote areas of the country. Almost one-third of the population in the North zone is from the most remote areas, whereas 14 percent each from the Central and South zones are from the most remote areas. Additionally, among the regions of the country, three-fifths (60 percent) of the population from the Central Highland region falls in the most remote category, followed by the Northern, North Eastern and Western regions of the country.

Table 2.9 Remoteness quintiles

Percent distribution of the households by remoteness quintiles according to residence, zone and region, Afghanistan 2010

Residence/region	Remoteness quintile[1]					
	Most remote	Second	Middle	Fourth	Least remote	Number of population
Residence						
Urban	14.2	13.7	20.0	24.5	27.6	34,788
Rural	27.8	27.7	20.2	14.1	10.2	140,650
Zone						
North	32.7	19.4	19.8	16.7	11.5	53,862
Central	13.8	18.9	22.1	19.1	26.1	62,668
South	13.6	21.6	18.5	23.9	22.4	58,908
Region						
North Eastern	25.2	24.2	25.0	14.5	11.0	26,300
Northern	38.3	15.7	15.9	18.2	11.9	27,562
Western	25.1	15.2	23.2	17.2	19.3	21,982
Central Highland	60.1	21.7	18.2	0.0	0.0	5,974
Capital	8.5	20.0	21.9	20.4	29.2	34,712
Eastern	10.9	13.9	12.2	35.9	27.2	30,312
Southern	13.0	18.8	19.7	18.7	29.8	12,656
South Eastern	17.7	34.8	24.4	17.0	6.2	15,940
Total	20.3	20.0	20.1	19.8	19.8	175,438

[1] The remoteness quintile was not weighted by de jure members because they are cluster-based and will not show a uniform distribution when tabulated by the de jure population. The percent distribution per household is weighted by the assumed cluster population multiplied by the selection probability, while the total household population in the last column is weighted by the household weight.

2.7 MIGRANTS FROM THE HOUSEHOLD

The AMS 2010 collected information on household migration in the five years before the survey in two ways. Information on out-migration was obtained by asking if any member who had been part of the household five years before the survey on March 21, 2005 (1 Hammal 1384 in the Afghan calendar) had since moved away. For each individual who had moved, information was collected on the month and year in which the person moved out, the person's age at the time of the move, and the reason that the person moved away. Information on migration into the household was obtained by asking whether each individual listed in the household schedule had been present in the household on March 21, 2005. If the member had not been present on that date, information was collected on the month and year in which the individual moved into the household (or was born in the case of young children). The migration data are obviously subject to recall errors. The data also do not capture the migration experience of individuals who may have moved into (or been born) after March 21, 2005 and moved out of the household before the AMS 2010 or household members present who were present on March 21, 2005, moved out, and then returned prior to the survey.

Twenty-six percent of households reported that at least one person age 15 years and older who had been present in the household on March 21, 2005 had moved out of the household at some time in the five-year period before the survey (Figure 2.2). One-fifth (21 percent) of urban households and slightly more than one-fourth (27 percent) of rural households in Afghanistan reported the out-migration of at least one usual adult resident in the five years before the survey.

Figure 2.2 **Percentage of Households Reporting Out-migration of at Least One Member 15 Years and Older in the Past Five Years**

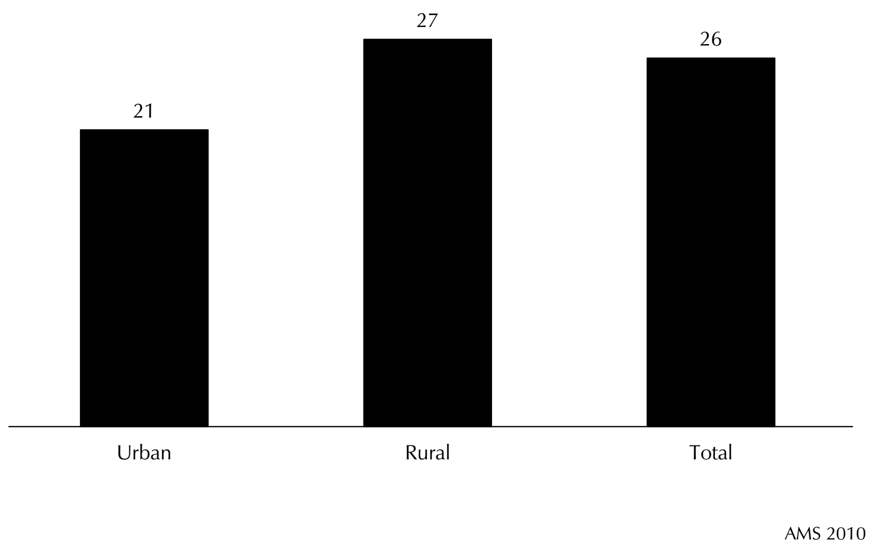


Table 2.10 shows the distribution of household members 15 years and older who were reported to have moved away in the five years before the survey by background characteristics. It is important to note again that the data on age were reported by proxy, that is, by members left behind. The data on residence, zone and region also reflect the place where the household reporting the out-migration resided at the time of the AMS 2010. It does not necessarily reflect where the household was living on March 21, 2005. Similarly, the information on wealth quintile refers to the status of the household from which the household member migrated.

The data demonstrate that more men than women have out-migrated. Among male adult migrants, more than three-quarters left during their early working years, that is, during age 15-29. Men who have migrated out were mostly from households in rural areas (86 percent), and the North and Central zones (39 percent each). Among the regions of the country, one-fifth of male out-migrants were reported by households in the Northern region of the country, whereas only 5 percent of male out-migrants were reported by households in the South Eastern region of the country. More than half (56 percent) and three-fifths (61 percent) of the male out-migrants are from households in the two lowest wealth quintiles and the two most remote quintiles, respectively.

The analysis also suggests that among adult female out-migrants, more than nine-tenths (94 percent) left in their early reproductive years, that is, during the ages of 15-29. Women who have migrated out are mostly from households in the rural areas (79 percent) and the Central zone (45 percent). Among the regions of the country, nearly two-fifths of female out-migrants were reported by households from the Capital and Western regions of the country, while only 5 percent of the female out-migrants were from households in the Central Highland region of the country. The percent of male and female out-migrants decreases as remoteness declines. For example, 27-30 percent of female out-migrants are from households in the most remote and second most remote quintiles and this percentage decreases to 10 percent among women in the least remote quintile.

In addition to the magnitude of household migration, the reason for out-migration was captured. The results are presented in Figure 2.3. An overwhelming majority (72 percent) of males migrated for work; contrary to that, nearly 74 percent of females migrated for the purpose of family or marriage.

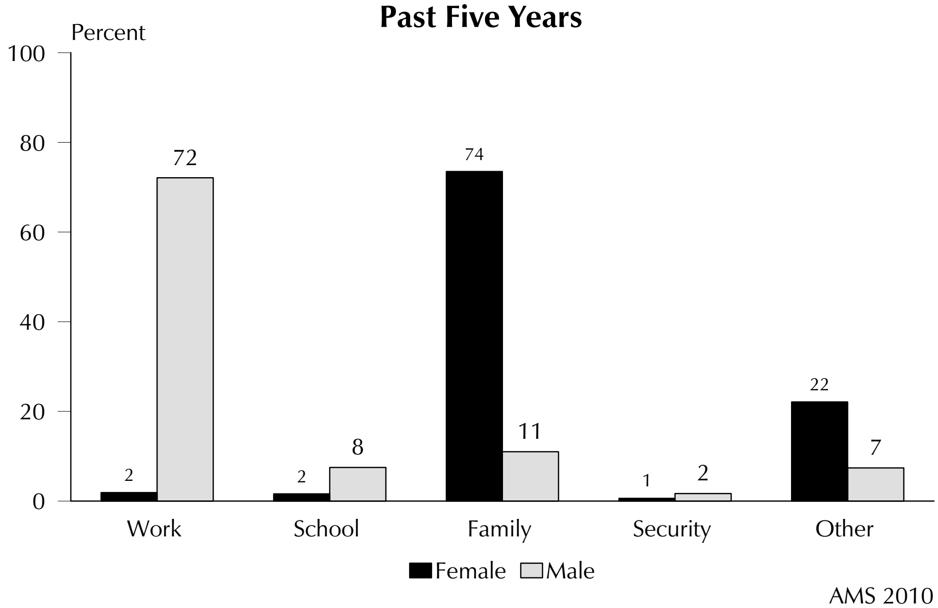
Table 2.10 Migrants who have left from households by background characteristics

Percent distribution of migrants age 15 years and older who have left from households in the five years preceding the survey, according to background characteristics, by sex, Afghanistan 2010

Background characteristic	Female		Male		Total	
	Percent	Number	Percent	Number	Percent	Number
Age at time of migration						
15-19	50.1	1,555	26.0	1,272	35.4	2,861
20-24	35.4	1,099	33.0	1,613	34.0	2,747
25-29	8.2	255	18.3	896	14.4	1,162
30-34	2.0	63	9.1	442	6.3	509
35-39	0.9	27	5.3	261	3.6	291
40-44	0.9	29	2.6	129	2.0	158
45-49	0.6	20	1.8	90	1.4	112
≥50	1.4	43	3.5	170	2.6	213
Don't know/missing	0.3	11	0.3	14	0.3	25
Residence						
Urban	20.8	644	14.5	708	16.9	1,364
Rural	79.2	2,457	85.5	4,178	83.1	6,714
Zone						
North	27.1	839	38.5	1,883	33.8	2,733
Central	44.7	1,388	39.2	1,913	41.3	3,337
South	28.2	875	22.3	1,090	24.8	2,007
Region						
North Eastern	11.8	367	18.0	878	15.5	1,254
Northern	15.2	472	20.6	1,005	18.3	1,479
Western	18.9	587	16.9	827	17.6	1,422
Central Highland	4.9	153	6.8	330	6.0	487
Capital	20.9	648	15.5	756	17.7	1,428
Eastern	6.4	199	10.0	487	8.5	689
Southern	9.4	292	7.0	340	8.3	669
South Eastern	12.4	384	5.4	264	8.0	649
Wealth quintile						
Lowest	18.2	563	29.2	1,425	24.8	2,002
Second	23.7	735	26.3	1,286	25.3	2,040
Middle	17.9	555	17.2	843	17.5	1,411
Fourth	18.5	573	13.8	676	15.6	1,264
Highest	21.7	675	13.4	656	16.8	1,361
Remoteness quintile						
Most remote	26.9	834	31.3	1,527	29.4	2,372
Second	30.0	931	29.3	1,431	29.8	2,408
Middle	20.6	639	19.3	942	19.8	1,601
Fourth	13.0	402	11.8	577	12.2	985
Least remote	9.6	296	8.4	410	8.8	710
Total	100.0	3,102	100.0	4,886	100.0	8,077

Note: Total includes 89 migrants with missing data on sex.

Figure 2.3 **Percent Distribution of Out-Migrants 15 Years and Older from Households by Main Reason for Migrating in the Past Five Years**



The AMS 2010 also collected information on usual residents age 15 years and older who had moved into or joined the sample households in the five years prior to the survey. Thirty percent of households reported that at least one current member of the household had moved into the household at some point in the past five years (Figure 2.4). Forty-two percent of urban households and 27 percent of rural households had at least one person who had migrated into the household.

Figure 2.4 **Percentage of Households Reporting In-migration of at Least One Member 15 Years and Older in the Past Five Years**

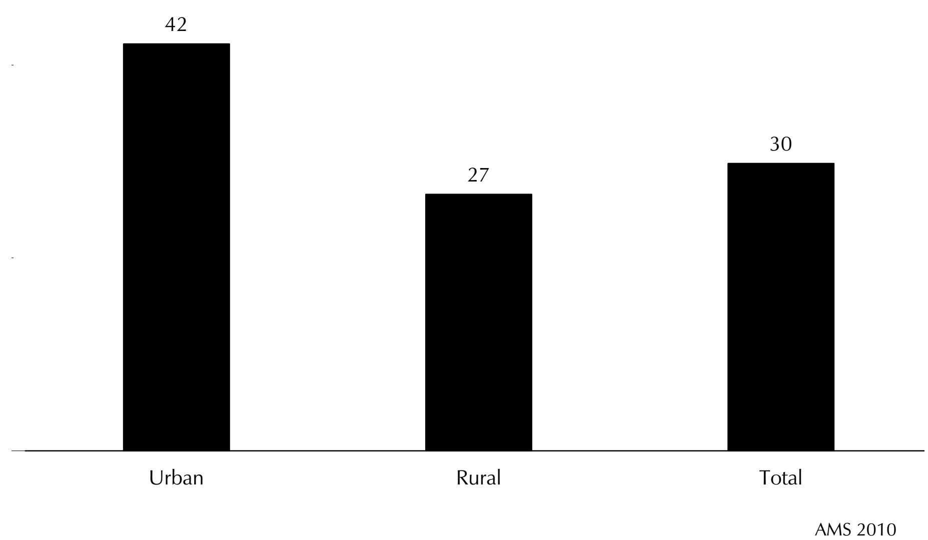


Table 2.11 shows in-migration by background characteristics. Data show that among male in-migrants 15 years and older, nearly half have moved in during the early phase of their working life, that is, age 15-29. Slightly more than half of male in-migrants were currently living in urban households. The

Central zone (56 percent) has the highest proportion of male in-migrants of all of the zones of the country. Among the regions, nearly two-fifths of male in-migrants live in the Capital region of the country, whereas only 2 percent of male in-migrants live in the Central Highland region of the country. Of note is that over two-fifths (42 percent) of male in-migrants are in the highest wealth quintile. There is little difference in the percent distribution of male in-migrants by remoteness quintile.

It is interesting to note that there are more adult male than female out-migrants but many more adult female in-migrants. The data also show that among female in-migrants, more than two-thirds (70 percent) changed residence during their early reproductive years, that is, at age 15-29. Female in-migrants were most often in rural areas (64 percent) and the Central zone (47 percent). Among the regions of the country, over one-quarter (28 percent) of female in-migrants were found in the Capital region, whereas only 3 percent of female in-migrants were in the Central Highland region of the country. In addition, nearly one-third (31 percent) of female in-migrants are in the highest wealth quintile. In contrast, only 13 percent of female in-migrants are in the lowest wealth quintile. Nearly one in four female in-migrants is in the second most remote quintile, with in-migrants least likely to be in the least remote quintile.

Table 2.11 Household in-migrants by background characteristics

Percent distribution of in-migrants age 15 years and older to households in the five years preceding the survey, according to background characteristics, by sex, Afghanistan 2010

Background characteristic	Sex				Total	
	Female		Male			
	Percent	Number	Percent	Number	Percent	Number
Age at time of migration						
15-19	42.4	3,715	18.6	955	33.6	4,670
20-24	19.5	1,709	15.0	768	17.8	2,477
25-29	8.5	747	13.1	674	10.2	1,421
30-34	5.1	446	10.2	521	7.0	967
35-39	4.3	377	8.9	455	6.0	833
40-44	2.9	256	6.4	327	4.2	583
45-49	2.2	197	5.9	301	3.6	498
≥50	8.3	729	14.4	736	10.5	1,465
Don't know/missing	6.8	594	7.6	389	7.1	983
Residence						
Urban	36.1	3,164	52.9	2,711	42.3	5,875
Rural	63.9	5,605	47.1	2,415	57.7	8,021
Zone						
North	24.1	2,115	20.7	1,059	22.8	3,174
Central	46.5	4,079	56.4	2,891	50.2	6,970
South	29.4	2,575	22.9	1,176	27.0	3,751
Region						
North Eastern	10.3	899	7.0	357	9.0	1,256
Northern	13.9	1,216	13.7	702	13.8	1,918
Western	15.1	1,327	13.7	704	14.6	2,031
Central Highland	2.9	257	2.4	124	2.7	381
Capital	28.4	2,494	40.3	2,063	32.8	4,558
Eastern	13.1	1,147	13.1	669	13.1	1,816
Southern	6.0	524	4.4	227	5.4	750
South Eastern	10.3	905	5.5	280	8.5	1,184
Wealth quintile						
Lowest	13.3	1,170	10.3	526	12.2	1,695
Second	18.0	1,575	12.7	650	16.0	2,225
Middle	17.9	1,574	15.8	808	17.1	2,382
Fourth	19.5	1,710	19.3	988	19.4	2,699
Highest	31.2	2,740	42.0	2,154	35.2	4,895
Remoteness quintile						
Most remote	22.7	1,991	19.6	1,005	21.6	2,996
Second	24.7	2,166	19.9	1,022	22.9	3,188
Middle	20.9	1,830	21.9	1,125	21.3	2,955
Fourth	17.4	1,527	19.9	1,023	18.3	2,549
Least remote	14.3	1,256	18.5	951	15.9	2,206
Total	100.0	8,769	100.0	5,126	100.0	13,895

2.8 CHARACTERISTICS OF FEMALE RESPONDENTS

This section of the chapter describes the demographic and socioeconomic profile of female respondents interviewed in the AMS 2010 with the individual Woman's Questionnaire. This information is useful for interpreting the survey findings and understanding results presented later in the report and serves as an indication of the representativeness of the survey. The survey collected basic information on women's age, level of education, marital status, and place of residence.

The AMS 2010 gathered information from all women age 12-49 years. A description of the background characteristics of the 47,848 women age 12-49 who were interviewed during the survey, appears in Table 2.12.

Table 2.12 Background characteristics of respondents

Percent distribution of women age 12-49 by selected background characteristics, Afghanistan 2010

Background characteristic	Weighted percent	Weighted	Unweighted
Age			
12-14	17.5	8,382	8,279
15-19	24.0	11,496	11,333
20-24	16.6	7,952	8,039
25-29	12.3	5,901	6,025
30-34	8.8	4,189	4,228
35-39	8.6	4,109	4,136
40-44	6.7	3,198	3,196
45-49	5.5	2,620	2,612
Marital status			
Never married	44.6	21,357	21,289
Married	53.9	25,783	25,842
Divorced/separated	0.1	47	50
Widowed	1.4	662	667
Residence			
Urban	20.3	9,696	14,936
Rural	79.7	38,152	32,912
Zone			
North	29.7	14,214	14,960
Central	35.6	17,034	14,902
South	34.7	16,599	17,986
Region			
North Eastern	14.2	6,776	7,351
Northern	15.5	7,438	7,609
Western	12.5	5,990	5,125
Central Highland	3.4	1,647	908
Capital	19.6	9,397	8,869
Eastern	17.5	8,389	7,681
Southern	7.3	3,504	5,020
South Eastern	9.8	4,706	5,285
Education			
No education	76.2	36,477	35,096
Madrassa	1.2	590	561
Primary	11.8	5,626	5,997
Secondary	9.6	4,589	5,429
Higher	1.2	567	765
Total 12-49	100.0	47,848	47,848

Seven in ten women (70 percent) are under age 30. In general, the proportion of women in each age group decreases as age increases, reflecting the comparatively youthful age structure of the population in Afghanistan as a result of high fertility and mortality levels in the past.

The data also show that more than half of interviewed women (54 percent) were married at the time of the survey. The proportion of women divorced or separated is negligible, and widows constitute only 1 percent of respondents.

The place of residence is another characteristic that determines access to services and exposure to information pertaining to reproductive health and other aspects of life. The majority of respondents reside in rural areas, with only one-fifth of interviewed women residing in urban areas. More than one-third of respondents reside in the Central and Southern zones of the country (36 and 35 percent, respectively). The remaining 30 percent live in the Northern zone.

The distribution of respondents by region shows that about one in five women are from the Capital region, and the same proportion is from the Eastern region. Sixteen percent live in the Northern region, 14 percent are from the North Eastern region, and 13 percent are from the Western region, with nearly 10 percent from the South Eastern region. In each of the remaining regions, the proportion of respondents is less than 10 percent. Women are least likely to be from the Central Highland region (3 percent).

2.9 EDUCATIONAL ATTAINMENT OF WOMEN

Studies have shown that education is one of the major socioeconomic factors that influence a person's behavior and attitudes. In general, the higher the level of education of a woman, the more knowledgeable she is about the use of health facilities, family planning methods, and her health and that of her children.

Women in Afghanistan have long been deprived of education. Their literacy level is one of the lowest compared with other countries. However, there has been improvement over the past several years with Article 44 of the Constitution that legally protects the rights of women to education (Islamic Republic of Afghanistan, 2006).

Table 2.13 shows the percent distribution of women age 12-49 by the highest level of schooling attended or completed according to age, residence, zone, region, wealth quintile, and remoteness quintile. Survey results show that more than three-quarters (76 percent) of women have no education. Education decreases with age. Younger women are more likely than older women to be educated, indicating some success in the recent initiatives of the Afghan government to provide girls with access to education. The majority of women in rural areas (83 percent) have no education; in comparison, half of women in urban areas have some education.

Women who live in the South zone are most likely to have no education (87 percent) compared with women who live in the Central (67 percent) and North (75 percent) zones. The proportion of women who have no education ranges from a low of 62 percent in the Capital region to a high of 96 percent in the South Eastern region.

Table 2.13 Educational attainment

Percent distribution of women age 12-49 by highest level of schooling attended or completed, according to background characteristics, Afghanistan 2010

Background characteristic	Highest level of schooling								
	No education	Madrassa	Some primary	Completed primary	Some secondary	Completed secondary	More than secondary	Total	Number of women
Age									
12-14	58.5	1.3	23.9	4.7	11.0	0.5	0.0	100.0	8,382
15-19	64.2	1.4	10.9	3.2	17.7	1.9	0.8	100.0	11,496
20-24	80.5	1.4	6.0	1.7	5.4	2.5	2.5	100.0	7,952
25-29	86.0	1.4	5.3	1.1	3.0	1.7	1.6	100.0	5,901
30-34	88.2	1.2	4.4	0.9	2.6	1.4	1.4	100.0	4,189
35-39	89.1	0.8	4.3	0.9	2.0	1.4	1.5	100.0	4,109
40-44	90.9	0.7	2.9	0.8	2.3	1.2	1.2	100.0	3,198
45-49	93.6	1.0	2.0	0.7	1.2	0.5	0.9	100.0	2,620
Residence									
Urban	50.0	0.6	15.7	4.2	20.8	4.4	4.4	100.0	9,696
Rural	82.9	1.4	7.9	1.8	4.9	0.8	0.4	100.0	38,152
Zone									
North	75.0	0.6	9.9	2.4	9.7	1.4	1.2	100.0	14,214
Central	66.7	0.8	13.4	3.2	12.0	2.1	1.9	100.0	17,034
South	87.2	2.2	5.2	1.2	2.7	1.0	0.5	100.0	16,599
Region									
North Eastern	74.4	0.3	8.7	3.3	10.4	1.8	1.1	100.0	6,776
Northern	75.4	0.9	10.9	1.6	9.0	1.0	1.2	100.0	7,438
Western	75.3	1.3	11.3	2.7	7.4	1.2	0.8	100.0	5,990
Central Highland	63.0	2.2	25.4	3.5	5.6	0.1	0.1	100.0	1,647
Capital	61.8	0.2	12.6	3.4	16.0	3.1	2.8	100.0	9,397
Eastern	86.4	3.3	4.8	1.4	2.8	0.8	0.5	100.0	8,389
Southern	77.5	2.1	9.7	1.8	5.3	2.6	1.0	100.0	3,504
South Eastern	95.6	0.3	2.8	0.4	0.6	0.2	0.2	100.0	4,706
Wealth quintile									
Lowest	81.4	0.9	10.0	2.0	4.9	0.6	0.2	100.0	8,918
Second	80.7	1.2	9.7	2.1	5.1	0.8	0.5	100.0	9,687
Middle	83.6	1.1	7.1	1.5	5.7	0.6	0.3	100.0	9,442
Fourth	81.4	2.0	7.6	1.8	5.6	1.1	0.5	100.0	9,920
Highest	55.0	0.9	13.0	3.7	18.7	4.4	4.3	100.0	9,881
Remoteness quintile									
Most remote	79.6	1.3	10.4	1.7	5.9	0.7	0.4	100.0	11,875
Second	79.3	1.3	8.5	2.4	6.5	1.2	0.8	100.0	13,689
Middle	78.9	0.7	8.2	2.1	7.7	1.5	1.1	100.0	9,539
Fourth	74.0	1.7	8.7	2.2	9.8	2.0	1.6	100.0	7,939
Least remote	57.8	1.0	14.3	3.7	16.0	3.6	3.7	100.0	4,806
Total	76.2	1.2	9.5	2.2	8.1	1.5	1.2	100.0	47,848

Not surprisingly there is a strong correlation between household wealth and education. The proportion of women with no education is lowest among women in the highest wealth quintile (55 percent) and ranges between 81 and 84 percent among women in the other four wealth quintiles. Also of note is the proportion of women with some secondary or higher education which ranges from a high of 27 percent among women in the wealthiest households to a low of 6-7 percent among women in the other four wealth quintiles.

Education is also strongly correlated with remoteness. Education is highest among women who are in the least remote quintile. For example, 58 percent of women in the least remote quintile have no education, compared with 74-80 percent of women in the other four remoteness quintiles. With the exception of women who have madrassa or some primary education, the percent of women with all other levels of education rises from most remote to least remote.

2.10 Conclusion

The AMS 2010 enumerated a total of 175,079 persons, with males outnumbering females at 51 percent. Nearly half of Afghanistan's population is under age 15, and 16 percent is under age 5. Persons age 65 and older account for less than 3 percent of the total population. The overall sex ratio is 103, and is lower than previous national estimates.

The Myer's Index indicates that 17 percent of the household population had their ages misreported due to heaping on primarily ages ending in '0' and '5'. Atypically, there is no obvious heaping at ages 5 or 15.

The vast majority of households are headed by men, with the proportion of female-headed households slightly higher in urban areas than in rural areas. The mean household size for the country is 7.8 persons per household, with small urban-rural difference. Eight percent of households have a child under 18 who has lost one parent (single orphan) compared with 1 percent of households with double orphans. Orphanhood in Afghanistan increases with children's age from 1 percent of children under age 2 to 11 percent of children age 15-17.

Access to safe drinking water has increased recently. Just over one in two households obtain drinking water from an improved source, with three-quarters of urban households and half of rural households having access to safe drinking water. However, the country has a long way to go in improving sanitation. Only one-fifth of households have an improved toilet facility, while four-fifths have a non-improved toilet facility and one-fifth have no toilet facility at all. Less than half of households are electrified.

In terms of socioeconomic status, more than two-thirds of urban households fall in the richest wealth quintile. Households in the Central zone are more likely to fall in the highest wealth quintile than households living in the South and North zones with the population residing in the Central Highland region being the poorest. Rural households are twice as likely as urban households to live in the most remote areas of the country. Almost one-third of the population in the North zone is from the most remote areas. Additionally, among the regions of the country, three-fifths of the households from the Central Highland region fall in the most remote category.

A total of 47,848 women age 12-49 were interviewed during the survey. The majority of women were under age 25 years and more than half were married at the time of the survey. The majority of respondents reside in rural areas, with just one-fifth residing in urban areas. More than three-quarters of women have no education. Younger women are more likely than older women to be educated, indicating some success in the recent initiatives of the Afghan government to provide girls with access to education. Women who live in the South zone are least likely to be educated compared with women who live in the Central and North zones.

FERTILITY, MARRIAGE, AND FAMILY PLANNING 3

One objective of the AMS 2010 was to examine fertility patterns in Afghanistan. An understanding of these patterns is important since high fertility and related factors such as short birth intervals are associated with increased risk of maternal and child mortality. It is also important because of the government's policy to reduce the total fertility rate to a level closer to that of other countries in the region in order to create balance between population growth and economic development in Afghanistan.

This chapter first describes the pregnancy history data, which is the source of the information used to investigate fertility patterns and mortality patterns (Chapter 5), and discusses a number of issues that affect the quality of the pregnancy history information. Using data on live births obtained in the pregnancy histories collected from ever-married women age 12-49, this chapter then describes current levels, differentials and trends in age-specific fertility and cumulative fertility in Afghanistan and presents information on the length of birth intervals, age at first birth, and teenage pregnancy and motherhood. Information on other pregnancy outcomes, particularly stillbirths, is discussed next. This chapter then considers marriage patterns, particularly the age at which women marry, since this is one of the major influences on fertility levels. Finally, the chapter reports on current knowledge and use of family planning methods for fertility regulation.

3.1 PREGNANCY HISTORY DATA

The AMS 2010 is the only national-level survey in Afghanistan to collect complete histories of women's childbearing experience. The data from the pregnancy histories are used in this chapter to investigate fertility behavior.

3.1.1 Data Collection Procedures

Data related to women's fertility experience were among the most important information collected in the AMS 2010. To obtain the pregnancy history data, ever-married women age 12-49 were asked about the number of children living at home, children living elsewhere, and children who had died, by sex, in order to obtain the total number of live births that women had experienced in their lifetime. A complete pregnancy history was then administered. For each live birth, information was collected on the name, sex, age, and survival status of the child. For children who had died, age at death was recorded. In addition to information on live births, the pregnancy history section included questions on all pregnancies that did not result in a live birth, including the month and year the pregnancy ended and the duration of the pregnancy.

Interviewers were given extensive training in probing techniques designed to help respondents report on their live births as well as provide information on stillbirths and pregnancies that had terminated before full term. Interviewers were instructed to check any documents (such as school certificates or vaccination cards) that might provide additional information on dates of birth, and to probe for any additional pregnancies in each interval in order to prevent the omission of births, especially of children who died soon after birth. In addition, interviewers were provided with a historical calendar, specific to events that occurred in the areas in which they were conducting the interviews to help women better report on their pregnancies.

3.1.2 Data Quality Assessment

The pregnancy history data obtained in the AMS 2010 are subject to several sources of errors that are inherent in efforts to obtain retrospective data on women's childbearing experience. First, the data are affected by women's willingness to report on all of the pregnancies they had in their lifetime. Women may find it painful to discuss pregnancies that ended in miscarriages or stillbirths, or report on children who were born alive but later died. Women, particularly older women who are being asked to report on events that occurred over several decades, also may simply not recall some events, especially those that occurred early in their reproductive lives. Interviewers may also fail to record some events women report to lighten their workload. Whatever the source, if omission (the failure to report pregnancies) occurs frequently, it can seriously bias estimates of the level of fertility. If there is a tendency to disproportionately omit stillbirths or children who have died, it may also affect mortality levels.

Another common source of error in pregnancy history data arises from the difficulties in obtaining accurate information on dates of birth, ages at which children died or the number of months a woman was pregnant when the pregnancy terminated. Such data can be very problematic to collect in settings such as Afghanistan where literacy levels are low. To the extent that errors in reporting information are due to poor recall, they generally tend to be greater the further back in time that the pregnancy occurred. Displacement also can be the result of deliberate misreporting of birth dates by interviewers. This typically occurs if sections of a questionnaire are administered only for children born after a certain date—which is the case in the AMS 2010—and interviewers may seek to reduce their workload by moving the dates of birth of children born in the period of interest back in time to avoid asking these questions. Whatever the source, errors in the reporting of birth dates can cause a distortion in the time trends in fertility and mortality estimates while errors in reporting ages at death can adversely affect the age pattern of mortality.

A number of data quality tables were run to assess the extent of omission and displacement in the AMS 2010 birth history data. Those tables are presented in Appendix C. In the discussion that follows, the focus is on how data quality issues may affect the fertility estimates.

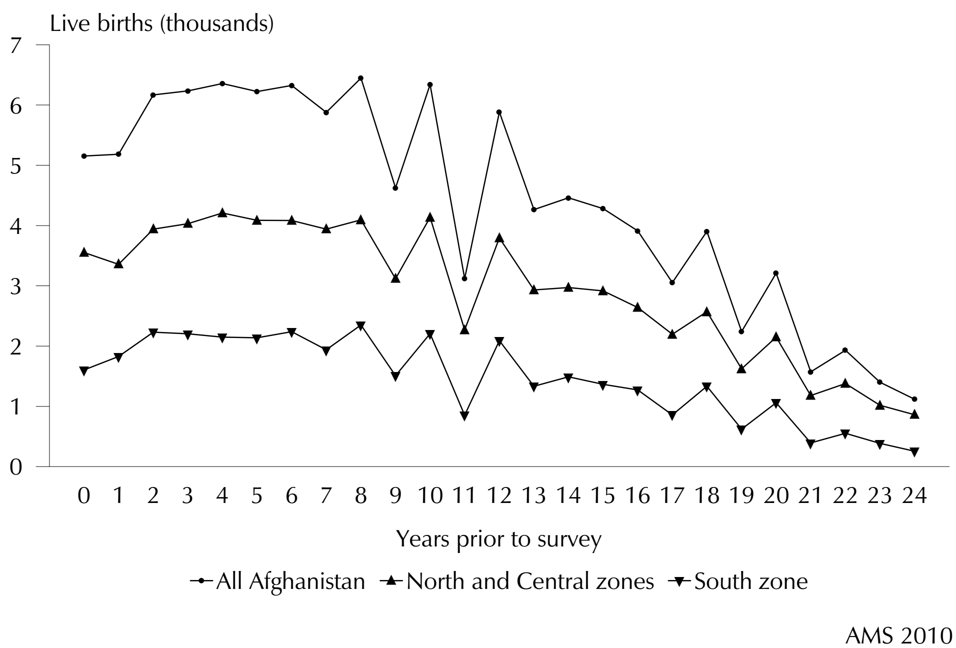
Omissions can be difficult to detect and quantify. One sign of potential omission is an abnormal sex ratio at birth. The sex ratio, typically expressed as the number of males per 100 females, is expected to be around 103-106 at birth. Sex ratios for Afghanistan and for the North, Central and South zones are presented in Appendix Table C.5. For Afghanistan as a whole, the sex ratios at birth for various calendar-year periods before the AMS uniformly exceed the normal ratio, implying a consistent underreporting of female births. For example, for the most recent calendar period 2006-2010 (1385-1389 in the Afghan calendar), the ratio is 115.7, around 10 percent above the normal sex ratio. An adjustment for these missing female births would result in an increase of about 5 percent in the total number of births. The sex ratios for the South zone are more exaggerated than those for the North and Central zones, suggesting a much greater tendency to underreport female births in the South zone than in the other areas.

Figure 3.1 presents the distribution of live births by the number of years prior to the survey. A noticeable drop in the number of births is evident in the two-year period immediately prior to the survey, which comprises two of the three years on which the current fertility estimates discussed later in the chapter are based. The drop is more pronounced in the South zone than in the North and Central zones combined. This pattern likely results from a combination of falling fertility and underreporting (omission) of births, but ascertaining the relative contribution of each of these components is not possible with the data available.

Figure 3.1 also shows evidence of heaping year of birth, particularly on even numbers and in the period 10 or more years prior to the survey. The heaping on the even years generally offsets the deficits in the odd years and, thus, will not have a major effect on fertility trends. Notably, the results show no evidence of deliberate age displacement by the interviewer; such displacement would be expected to have transferred births from the period 3-4 years before the survey to a point 5 years or more before the survey in order to avoid asking the detailed questions on maternal health care that were asked for births that occurred in the period 0-4 years before the survey.

In conclusion, some omission and displacement are inherent in the collection of retrospective birth history data in surveys, and there is some evidence of both problems in the AMS birth history data. However, while it is difficult to quantify omission, and, thus, assess its exact impact, the problems of omission of female births and possibly of births in the most recent period that were detected are largely concentrated in the South zone and do not appear to be sufficiently large overall to seriously compromise the estimation of the overall fertility levels. With regard to displacement, there is evidence of some age heaping, which is expected in societies like Afghanistan where literacy is low, but no sign of deliberate transference of children out of the most recent five-year period. Thus, displacement does not represent an issue in the analysis of fertility trends presented in this chapter.

Figure 3.1 **Live Births by Years Prior to the AMS 2010**



Finally, as discussed in Chapter 1, some areas in Afghanistan are not represented in the AMS 2010 sample due to security reasons. The failure to cover these areas would not affect fertility estimates from the survey if women in the excluded areas had on average the same fertility as the interviewed population. However, because the excluded areas were predominantly rural and comparatively isolated, the presumption is that fertility is higher in those areas than in the areas covered in the survey. Thus, the sample coverage problems can be assumed to introduce a downward bias in the fertility measures presented in this chapter. However, in reviewing results presented in this chapter, it is important to recognize that any bias introduced into the national estimates by the sample coverage problems is not likely to be too large. For example, if the fertility rates in the excluded areas were 30 percent higher than in the covered areas, this would raise the national rate by less than 4 percent. The situation is of course more problematic for the estimates for the South zone, where roughly a third of the population was not covered in the AMS 2010.

3.2 FERTILITY BEHAVIOR

3.2.1 Current Fertility

Information from the pregnancy history is used in this section to assess current and completed fertility, and factors related to fertility such as age at first birth, birth intervals, and adolescent childbearing. The level of current fertility is one of the most important demographic indicators measured in the survey. For health and family planning policy makers, current fertility has direct relevance to population policy and programs. Measures of current fertility are presented in Table 3.1 for the three-year period preceding the AMS 2010, corresponding approximately to the calendar period of mid-2007-2010. A three-year period was chosen because it reflects the most current information yet also allows the rates to be calculated based on a sufficient number of cases to obtain estimates with a reasonable level of precision.

Table 3.1 shows several measures of current fertility for Afghanistan at the national level and by urban-rural residence. Age-specific fertility rates (ASFRs), expressed as the number of births per thousand women in a specified age group, are calculated by dividing the number of live births to women in a specific age group by the number of woman-years lived in that age group. The total fertility rate (TFR) is based on the ASFRs and is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. The general fertility rate (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44. The crude birth rate (CBR) is the number of births per 1,000 population during a specified period.

The total fertility rate for Afghanistan for the three years preceding the AMS 2010 is 5.1 children per woman. The overall age pattern of fertility as reflected in the ASFRs indicates that fertility is low among adolescents age 15-19, increases to a peak of 262 children per 1,000 women among those ages 25-29, and declines rapidly thereafter.

As expected, fertility is higher in rural areas (5.2 children per woman) than urban areas (4.7 children per woman). As the ASFRs show, the pattern of higher rural fertility is particularly evident in the 15-24 and 40-49 age groups (Figure 3.2). The urban-rural difference in fertility is most pronounced for women in the age group 20-24.

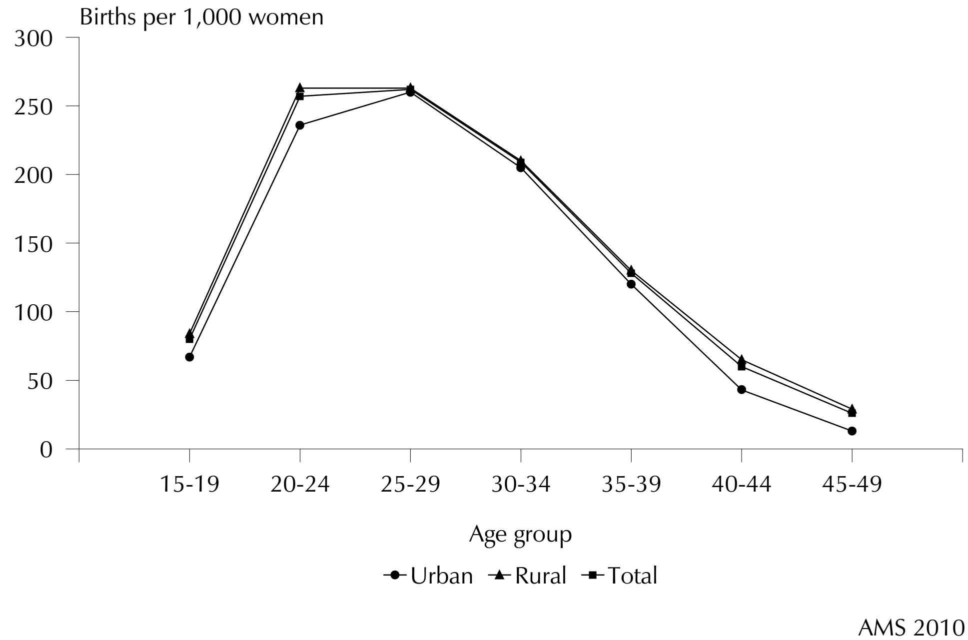
Table 3.1 Current fertility

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Afghanistan 2010

	Residence		
Age group	Urban	Rural	Total
15-19	67	84	80
20-24	236	263	257
25-29	260	263	262
30-34	205	210	209
35-39	120	130	128
40-44	43	65	60
45-49	13	29	26
TFR	4.7	5.2	5.1 CI: (5.0-5.3)
GFR	154	168	165
CBR	34.7	35.9	35.6
TFR (excluding South zone)	4.5	5.2	5.0 CI: (4.8-5.2)

Note: Age-specific fertility rates are per 1,000 women. Rates for the age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women age 15-44
CBR: Crude birth rate, expressed per 1,000 population
CI: Confidence interval

Figure 3.2 **Age-specific Fertility Rates by Urban-Rural Residence**



3.2.2 Fertility Differentials

Table 3.2 and Figure 3.3 present the differentials in the total fertility rate (TFR), the percentage of women age 15-49 who are currently pregnant, and the mean number of children ever born (CEB) to women age 40-49, by urban-rural residence, zone, region, education, wealth quintile and remoteness quintile. Women residing in the South zone have a higher TFR than women in the North and Central zones. TFR varies by region, with women in the South Eastern and Eastern regions having an average of one child more than women in the Central Highland region. The differentials in TFR across education groups are striking. Fertility decreases rapidly from 5.3 children per woman among women with no education to 2.8 children per woman among women who have a higher education. TFR is not uniformly associated with increasing wealth; however, women in the lowest wealth quintile have an average of 5.3 children compared with women in the highest quintile who have 4.8 children. A similar pattern is seen for remoteness quintile with women in the least remote quintile having the lowest fertility.

Table 3.2 also shows the percentage of women who reported being pregnant at the time of the survey. This percentage may be underreported since women may not be aware of a pregnancy, especially at the very early stages, and some women who are early in their pregnancy may not want to reveal that they are pregnant. Twelve percent of women reported being pregnant at the time of the survey. Rural women are more likely to be pregnant than urban women. The percentage of women currently pregnant ranges from a low of 9 percent among women in the Southern region to a high of 15 percent among those in the South Eastern region. The proportion of women currently pregnant varies considerably by women’s education, from 13 percent among women with no education to less than 6 percent among women with only secondary education.

Table 3.2 also presents a crude assessment of trends in the various subgroups by comparing current fertility with a measure of completed fertility (the mean number of CEB to women age 40-49). When fertility levels have been falling, the TFR will be substantially lower than the mean number of CEB to women 40-49. The comparison suggests that fertility has fallen by nearly two births during the past few decades from 6.9 births per woman to 5.1. Fertility has declined in all subgroups as seen in Table 3.2 with the difference between current and completed fertility highest among women with secondary education (2.4).

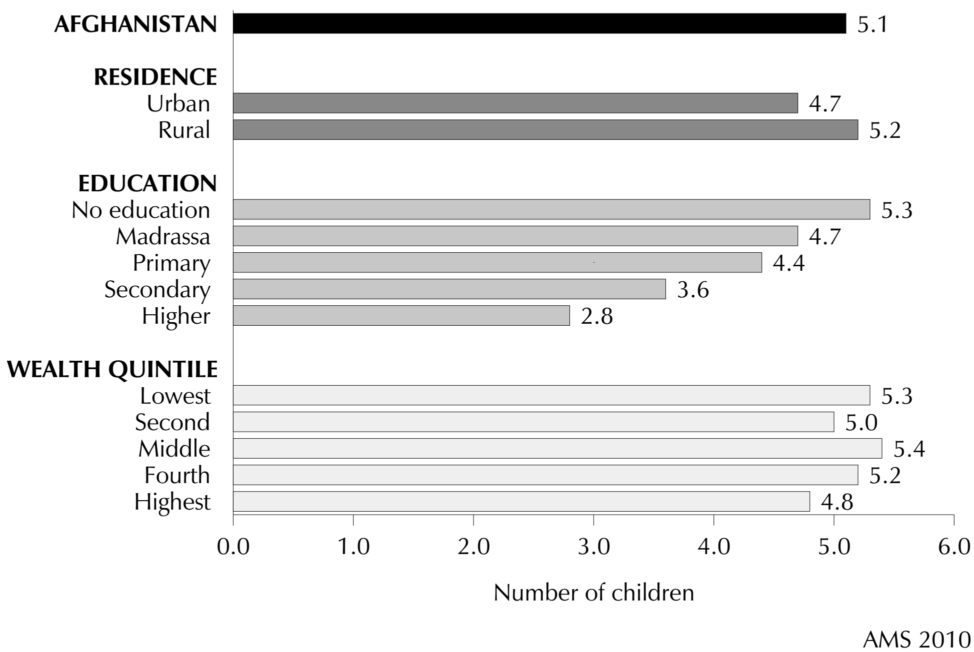
Table 3.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Afghanistan 2010

Background characteristic	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	4.7	9.5	6.8
Rural	5.2	12.8	6.9
Zone			
North	5.0	12.3	7.0
Central	5.0	11.1	6.9
South	5.3	12.9	6.8
Region			
North Eastern	5.1	13.1	7.2
Northern	4.9	11.6	6.9
Western	4.9	13.1	6.8
Central Highland	4.6	12.4	7.5
Capital	5.1	9.8	6.8
Eastern	5.6	13.5	7.1
Southern	4.7	9.0	5.7
South Eastern	5.5	14.7	7.2
Education			
No education	5.3	13.1	7.0
Madrassa	4.7	14.5	6.1
Primary	4.4	9.7	6.7
Secondary	3.6	5.8	6.0
Higher	2.8	6.8	4.9
Wealth quintile			
Lowest	5.3	12.3	6.8
Second	5.0	12.4	6.9
Middle	5.4	12.2	7.0
Fourth	5.2	13.4	6.9
Highest	4.8	10.3	6.8
Remoteness quintile			
Most remote	5.1	13.1	7.1
Second	5.0	12.4	6.9
Middle	5.2	11.6	6.7
Fourth	5.3	12.3	6.9
Least remote	4.8	9.7	6.7
Total	5.1	12.1	6.9

Note: Total fertility rates are for the period 1- 36 months prior to interview.

Figure 3.3 Total Fertility Rates by Background Characteristics



3.2.3 Fertility Trends

In addition to the comparison of current and completed fertility, trends in fertility over time can be examined by comparing age-specific fertility rates from the AMS 2010 for successive five-year periods preceding the survey (Table 3.3). Because women 50 years and older were not interviewed in the survey, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15-19 years before the survey because these women would have been over age 50 at the time of the survey and therefore not eligible to be interviewed.

Table 3.3 Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Afghanistan 2010

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	90	146	175	194
20-24	279	333	351	352
25-29	287	350	354	356
30-34	235	289	316	[359]
35-39	145	217	[257]	
40-44	68	[143]		
45-49	[28]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Nonetheless, the results in Table 3.3 show that fertility has dropped substantially among all age groups, mainly during the last 15 years. For example, the age-specific fertility rate for women age 15-19 declined from 175 births per 1,000 women in the 10-14 years preceding the survey to 90 births per 1,000 women in the 0-4 years before the survey, a 49 percent decline. The pace of fertility decline has increased in all age groups during the last 5 years compared to the preceding time periods.

Many factors may have contributed to the ongoing fertility decline in Afghanistan. The internal as well as external displacement of people due to decades of political instability and insecurity may be one of the fundamental reasons for this change. The movement of people from remote rural areas to semi-urban or urban areas may have influenced couples to have smaller families for social and economic reasons. Furthermore, exposure to modern means of communications and easy access to modern family planning methods not previously widely available in Afghanistan may also have had an impact.

Another frequently used approach to assessing trends in fertility is to compare the results from the most recent survey to findings from other data sources, including censuses and other surveys. Caution has to be exercised in making such comparisons since differences in the populations surveyed, the methodology used for obtaining the fertility estimates, and data quality can affect the interpretation when multiple data sources are used to examine changes over time in fertility levels. The situation is further complicated in Afghanistan by the relative lack of national level surveys.

The NRVA 2007/08 is the survey that is most similar in coverage and methodology to the AMS 2010, although the two surveys varied in the methodology used to obtain fertility estimates. [1] The decline in fertility in recent times in Afghanistan as seen in the AMS 2010 is consistent with the pattern reported in the NRVA 2007/8 (ICON-INSTITUTE, 2009), which estimated the TFR for the three-year period immediately before the survey at 5.3 births per woman (including Kuchi women).[2]

The 2003 MICS produced an indirect estimate of TFR from information collected on the number of children ever born to women age 15-49. The estimated TFR from the MICS 2003 for Afghanistan was 6.3 (CSO and UNICEF, 2004). However, there were several data quality issues associated with the implementation and analysis of the MICS 2003 that may render this estimate less reliable.

Other sources of TFR estimates for Afghanistan typically have used various demographic estimation techniques to derive the rates they report. The TFR estimates vary substantially. For example, data from the World Population Data Sheet for 2010 produced by the Population Reference Bureau estimates the TFR for Afghanistan for 2010 at 5.7 children per woman (PRB, 2011). The United Nations Population Division estimated the TFR for the period 2005-2010 at 6.6 children per woman (United Nations, 2011).

3.2.4 Pregnancy Outcomes

As discussed earlier, the AMS 2010 included the collection of a complete pregnancy history from each respondent. Thus, the survey provides information not only on the live births the women had, but also information on the miscarriages or stillbirths they experienced. Collecting information on pregnancy histories is more difficult than collecting birth histories retrospectively, particularly in the case of pregnancies that miscarry within the first few months after conception. Therefore, the total number of pregnancies and abortions may be underestimated, and caution should be exercised in interpreting these data. Abortion is illegal in Afghanistan, and there is also social stigma associated with it. Consequently, women may report an induced abortion as a spontaneous abortion or a stillbirth, or omit mentioning it altogether.

Data on pregnancy outcomes among ever-married women in the 10 years preceding the survey by age at the end of pregnancy are presented in Table 3.4. Overall, 98 percent of pregnancies resulted in a live birth and only 2 percent ended as a stillbirth or miscarriage. Women are less likely to report having had a miscarriage (0.7 percent) than a stillbirth (1.8 percent). There is not much variation in pregnancy outcomes across age groups, except for age group 45-49, where 6 percent of pregnancies ended in a stillbirth and 3 percent in a miscarriage.

[1] The estimate of TFR from the NRVA 2007/8 was derived from a partial birth history of recent deliveries, adjusted for under-reporting of children who later died. In contrast, as discussed above, the AMS 2010 collected a complete birth history with dates of birth of all children whether living or dead at the time of the survey, in addition to age at death of children who had died.

[2] The NRVA 2007/8 also produced an indirect estimate of fertility of 6.3 based on the assumption that fertility estimates from censuses and surveys tend to be underestimated. The Brass approach and an estimation equation based on the Coale-Trussell Fertility Model was used in calculating the indirect estimate of TFR (ICON-INSTITUTE, 2009).

Table 3.4 Pregnancy outcomes

Percent distribution of pregnancies reported by ever-married women that ended in the 10 years preceding the survey, by pregnancy outcome, according to age of the mother at end of pregnancy, Afghanistan 2010

Age at end of pregnancy	Live birth	Stillbirth	Miscarriage	Total	Number of pregnancy outcomes
<15	96.1	2.8	1.1	100.0	483
15-19	97.1	2.0	0.9	100.0	9,613
20-24	97.7	1.7	0.6	100.0	17,843
25-29	97.7	1.7	0.6	100.0	14,363
30-34	97.5	1.7	0.8	100.0	10,302
35-39	97.1	2.2	0.7	100.0	5,735
40-44	96.7	2.0	1.3	100.0	1,642
45-49	91.4	5.5	3.1	100.0	145
Total	97.5	1.8	0.7	100.0	60,127

3.2.5 Children Ever Born and Surviving

Table 3.5 shows the distribution of currently married women by the number of children they have had. In the AMS 2010, only ever-married women were asked about reproductive histories; therefore information on the reproductive history of never-married women was not collected. However, since almost no births in Afghanistan take place before marriage, it is assumed that the number of births to never-married women is negligible. The data represent the accumulation of births over time and have limited relevance to current fertility, especially within the context of declining fertility. Nevertheless, the table provides useful information on how average family size varies across age groups. The percentage of women in their forties who have never had children also provides an indicator of the level of primary sterility. In addition, comparison of the differences in the mean number of children ever born and surviving reflects the cumulative effects of mortality levels.

On average, women in their late 20s have given birth to 3.3 children and those in their late 30s have had 6.3 children. Women age 45-49 who are at the end of their reproductive life have given birth to an average of 7.2 children, of which 6.5 children are still surviving.

Voluntary childlessness is uncommon in Afghanistan, and couples with no children are likely to be unable to bear children. The level of childlessness among married women at the end of their reproductive period can be used as an indicator of the level of primary sterility. In Afghanistan, primary sterility among older, currently married women is around 2 percent.

Table 3.5 Children ever born and living

Percent distribution of currently married women by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Afghanistan 2010

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
12-14	(95.9)	(4.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	100.0	40	0.04	0.04
15-19	55.7	31.5	10.5	1.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	100.0	1,993	0.60	0.56
20-24	18.6	27.5	28.8	16.0	6.2	2.2	0.6	0.1	0.0	0.0	0.0	100.0	5,228	1.74	1.61
25-29	5.6	7.4	18.1	22.6	22.6	14.2	6.6	2.0	0.7	0.2	0.1	100.0	5,251	3.34	3.10
30-34	3.0	2.7	5.4	9.5	17.5	22.0	17.6	12.8	6.4	2.2	0.9	100.0	3,970	4.98	4.59
35-39	2.6	1.5	2.2	4.7	8.7	13.9	19.0	17.4	15.3	8.1	6.7	100.0	3,922	6.26	5.74
40-44	2.6	1.3	1.8	3.7	6.6	9.9	13.8	16.3	16.9	12.0	15.3	100.0	2,991	6.96	6.27
45-49	2.1	1.3	2.6	3.2	6.9	9.0	12.4	15.0	16.5	12.6	18.4	100.0	2,389	7.17	6.47
Total	10.7	10.4	11.9	10.9	11.3	10.8	9.8	8.3	6.9	4.2	4.6	100.0	25,783	4.27	3.91

Note: Figures in parentheses are based on 25-49 unweighted cases.

3.2.6 Birth Intervals

A birth interval is the length of time between two successive live births. Information on birth intervals provides insight into birth spacing patterns, which affect fertility as well as maternal, infant, and child mortality. Studies have shown that short birth intervals are associated with an increased risk of death for mother and baby, particularly when the birth interval is less than 24 months.

Table 3.6 shows the percent distribution of non-first births in the five years preceding the survey by number of months since the preceding birth, according to background characteristics. The median birth interval in Afghanistan is 27 months. The median number of months since a preceding birth increases with age, from a low of 23 months among mothers age 15-19 to a high of 31 months among mothers age 40-49. There is no marked difference in the length of the median birth interval by birth order or sex of the preceding birth.

Studies have shown that the death of a preceding child leads to a shorter birth interval than when the preceding child survives. The median birth interval is three months shorter among births for which the previous sibling is dead than among births for which the previous sibling is alive (24 months and 27 months, respectively). This difference in the birth interval may be due to the desire of parents to replace a dead child as well as the loss of the fertility-delaying effects of breastfeeding.

There are no marked differences in the median birth intervals by residence, zones, wealth quintiles or remoteness quintile. However, the median birth interval increases with the level of education from 27 months among uneducated mothers to 33 months among mothers with higher education.

Table 3.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Afghanistan 2010

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age									
12-19	31.5	23.8	31.7	11.3	1.8	0.0	100.0	311	23.0
20-29	20.8	22.3	37.3	13.5	4.4	1.8	100.0	11,630	25.5
30-39	13.8	18.8	36.2	16.5	7.7	7.0	100.0	9,500	27.9
40-49	11.1	15.1	33.2	17.3	10.8	12.5	100.0	2,482	31.4
Birth order									
2-3	20.3	21.8	36.3	13.8	4.7	3.0	100.0	8,738	25.7
4-6	15.6	19.8	36.3	15.9	6.9	5.6	100.0	9,435	27.2
7+	15.0	18.2	36.5	15.5	8.0	6.8	100.0	5,749	27.6
Sex of preceding birth									
Male	16.6	20.6	37.1	14.6	6.2	4.9	100.0	12,559	26.6
Female	17.8	19.7	35.6	15.5	6.5	4.9	100.0	11,363	26.7
Survival of preceding birth									
Living	15.9	20.4	36.9	15.4	6.4	5.0	100.0	22,309	26.8
Dead	35.0	16.9	28.3	9.8	5.9	4.1	100.0	1,613	23.6
Residence									
Urban	19.4	17.1	32.0	15.9	7.7	7.8	100.0	4,470	27.4
Rural	16.7	20.9	37.4	14.8	6.0	4.3	100.0	19,452	26.6
Zone									
North	17.3	17.7	33.1	17.4	8.1	6.4	100.0	7,330	28.2
Central	18.8	18.8	34.6	15.2	6.7	5.9	100.0	8,410	27.1
South	15.4	23.8	41.1	12.8	4.4	2.6	100.0	8,183	25.8
Region									
North Eastern	18.3	18.4	33.6	16.8	7.3	5.6	100.0	3,715	27.5
Northern	16.2	17.0	32.7	18.1	8.9	7.2	100.0	3,615	29.2
Western	15.0	18.2	35.4	18.2	7.1	6.2	100.0	2,988	28.5
Central Highland	13.7	19.1	37.5	16.3	7.5	5.9	100.0	725	28.2
Capital	22.0	19.1	33.7	13.1	6.4	5.7	100.0	4,697	26.1
Eastern	19.1	22.1	38.9	12.4	4.9	2.5	100.0	4,592	25.2
Southern	8.5	22.0	43.4	16.2	5.2	4.7	100.0	1,461	27.8
South Eastern	12.0	28.8	44.1	11.3	2.5	1.3	100.0	2,130	25.7
Education									
No education	17.2	20.4	36.8	14.9	6.1	4.6	100.0	21,547	26.6
Madrassa	17.0	18.8	42.4	12.9	5.7	3.2	100.0	267	26.3
Primary	18.0	18.1	33.3	16.0	8.3	6.3	100.0	1,217	27.4
Secondary	16.0	18.7	29.1	18.2	8.7	9.3	100.0	719	28.5
Higher	15.9	12.7	25.8	14.1	14.4	17.1	100.0	172	33.4
Wealth quintile									
Lowest	16.2	17.8	36.1	17.0	7.8	5.0	100.0	5,017	27.9
Second	17.2	19.0	35.2	16.4	6.6	5.6	100.0	4,814	27.5
Middle	16.5	23.0	38.6	12.9	5.5	3.5	100.0	4,813	26.0
Fourth	18.0	22.1	37.2	14.0	5.2	3.5	100.0	4,852	25.8
Highest	17.9	18.9	34.7	14.9	6.5	7.1	100.0	4,427	26.9
Remoteness quintile									
Most remote	17.1	18.9	35.5	16.0	7.3	5.2	100.0	6,187	27.3
Second	17.6	19.6	36.5	15.3	6.2	4.8	100.0	6,746	26.8
Middle	16.6	21.4	38.6	14.0	5.7	3.7	100.0	4,713	26.4
Fourth	16.7	22.2	36.4	14.4	5.3	4.9	100.0	4,016	26.1
Least remote	18.1	19.3	33.6	15.1	7.2	6.8	100.0	2,260	26.7
Total	17.2	20.2	36.4	15.0	6.3	4.9	100.0	23,922	26.7

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

3.2.7 Age at First Birth

The onset of childbearing has a major effect on the health of both mother and child. Early childbearing lengthens the reproductive period, thereby increasing the level of fertility. Table 3.10 shows the median age at first birth and the percentage of women who gave birth by exact ages, by five-year age groups. Eight percent of women age 25-49 have never given birth. The median age at first birth decreases steadily from 21 for women age 45-49 to 19.3 for women age 30-34 before rising at age 25-29.

Table 3.7 Age at first birth

Percentage of women who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Afghanistan 2010

	Percentage who gave birth by exact age							
Current age	15	18	20	22	25	Percentage who have never given birth	Number of women	Median age at first birth
15-19	0.9	na	na	na	na	92.3	11,496	a
20-24	4.3	22.7	39.6	na	na	46.2	7,952	a
25-29	6.2	28.8	49.2	67.6	81.6	15.3	5,901	20.1
30-34	7.3	36.7	56.4	73.4	86.1	6.6	4,189	19.3
35-39	5.2	31.1	54.3	72.9	87.6	3.9	4,109	19.6
40-44	6.0	28.8	48.2	69.9	87.9	3.7	3,198	20.1
45-49	4.9	22.0	39.6	58.5	79.6	2.4	2,620	21.0
25-49	6.0	30.0	50.3	69.1	84.5	7.6	20,017	20.0

na = Not applicable
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

Table 3.8 shows the median age at first birth by background characteristics. The median age at first birth is almost the same in urban and rural areas. Women in the North and Central zones give birth more than one year earlier than women in the South zone, which as noted has an urban bias. The median age at first birth among women age 25-49 is highest in the Southern and South Eastern regions (21) and lowest in the Central Highland region (18).

The median age at first birth increases with education after primary school. Women with no education give birth about four years earlier than women with higher education. The difference in the median age at first birth is less pronounced by household wealth and remoteness.

Table 3.8 Median age at first birth

Median age at first birth among women age 25-49 years, according to background characteristics, Afghanistan 2010

Background characteristic	Age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	20.7	19.8	19.6	19.9	20.7	20.1
Rural	20.0	19.1	19.6	20.2	21.0	19.9
Zone						
North	19.6	19.1	19.2	19.5	20.1	19.5
Central	19.6	18.6	19.0	19.4	20.6	19.4
South	20.8	20.0	20.5	21.2	22.1	20.8
Region						
North Eastern	19.1	18.6	18.9	18.9	19.7	19.0
Northern	20.1	19.6	19.4	20.1	20.6	19.9
Western	18.6	17.8	18.5	18.8	20.6	18.6
Central Highland	17.8	16.8	17.9	18.4	20.0	17.9
Capital	20.9	19.9	19.6	20.0	20.7	20.2
Eastern	20.5	19.7	20.1	20.9	21.2	20.4
Southern	20.9	20.0	21.0	21.7	22.8	21.1
South Eastern	21.2	20.5	20.5	21.3	22.5	21.1
Education						
No education	19.9	19.2	19.6	20.1	21.0	19.9
Madrassa	20.2	18.6	20.2	19.7	20.2	19.9
Primary	20.5	19.1	19.3	20.1	20.2	19.9
Secondary	21.6	20.3	20.5	20.4	21.6	20.8
Higher	a	22.7	22.4	22.8	24.7	24.0
Wealth quintile						
Lowest	19.1	18.2	18.8	19.7	20.3	19.0
Second	19.5	18.8	19.2	19.3	20.5	19.4
Middle	20.0	19.8	19.8	20.6	21.5	20.2
Fourth	20.7	19.6	20.2	20.8	22.0	20.6
Highest	21.2	20.3	20.0	20.2	20.5	20.5
Remoteness quintile						
Most remote	19.6	18.6	19.1	19.5	20.4	19.4
Second	20.0	19.0	19.7	20.2	21.0	19.9
Middle	20.2	20.0	19.9	20.4	21.5	20.3
Fourth	20.4	19.6	19.7	20.5	21.3	20.2
Least remote	20.5	19.9	20.1	20.2	21.4	20.3
Total	20.1	19.3	19.6	20.1	21.0	20.0

a = Omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

3.2.8 Adolescent Pregnancy and Motherhood

Adolescent pregnancy and motherhood are a major social and health issue in Afghanistan. Early teenage pregnancy can cause severe health problems for both the mother and her child. Moreover, an early start to childbearing greatly reduces the educational and employment opportunities of women and is associated with higher levels of fertility. Table 3.9 shows the percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and the percentage that have begun childbearing, by background characteristics.

Twelve percent of women age 15-19 have started childbearing, with 8 percent having had a live birth and 4 percent pregnant with their first child. By age 19, one-third of women have started childbearing. Early childbearing is higher among women in rural areas, those in the Central zone, and women in the Western region compared with their counterparts in the other geographic areas. Early childbearing is strongly associated with women's education and wealth, and decreases as education and wealth increase. Early childbearing and its relationship to remoteness is less pronounced.

Table 3.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and percentage who have begun childbearing, by background characteristics, Afghanistan 2010

Background characteristic	Percentage who: Have had a live birth	Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	0.4	1.2	1.6	2,662
16	1.5	1.7	3.2	2,483
17	5.6	5.2	10.8	1,951
18	12.4	6.9	19.6	2,909
19	24.6	8.5	33.2	1,491
Residence				
Urban	6.1	2.6	8.9	2,381
Rural	8.1	4.8	13.1	9,115
Zone				
Northern	7.4	3.2	10.7	3,250
Central	9.1	4.0	13.3	4,251
Southern	6.5	5.6	12.2	3,995
Region				
North Eastern	8.0	3.9	12.0	1,527
Northern	6.8	2.7	9.6	1,722
Western	13.8	5.9	19.8	1,475
Central Highlands	10.1	6.1	16.6	452
Capital	5.9	2.3	8.5	2,325
Eastern	8.9	5.4	14.4	1,967
Southern	5.7	4.4	10.1	783
South Eastern	3.2	6.8	10.1	1,245
Education				
No education	9.6	5.2	15.0	7,377
Madrassa	9.5	7.8	17.3	160
Primary	5.9	3.9	9.8	1,617
Secondary	2.7	1.8	4.5	2,255
Higher	3.3	1.7	5.0	87
Wealth quintile				
Lowest	10.1	3.8	14.0	2,052
Second	8.4	4.2	12.9	2,317
Middle	7.3	4.8	12.1	2,317
Fourth	6.6	5.4	12.1	2,457
Highest	6.4	3.5	10.0	2,354
Remoteness quintile				
Most remote	8.3	3.6	12.1	2,748
Second	7.0	5.0	12.2	3,366
Middle	7.4	5.4	12.8	2,282
Fourth	6.9	4.2	11.3	1,913
Least remote	10.0	2.6	12.7	1,187
Total	7.7	4.3	12.2	11,496

Note: Table excludes women age 12-14 years. There were no women age 12-13 who had begun childbearing and only 11 women age 14 who had begun childbearing.

3.3 MARRIAGE

Nuptiality (including current marital status and age at first marriage) is one of the principal factors that affect fertility levels in societies. When sexual activity usually takes place within marriage (such as in Afghanistan), marriage signals the onset of a woman's exposure to the risk of childbearing. In turn, in the absence of consistent contraceptive use or a widespread practice of abortion, the length of time women are exposed to childbearing is closely associated with fertility levels in a society. An examination of changes over time in the age at which women marry is useful for understanding the factors that may have contributed to the fertility declines.

3.3.1 Current Marital Status

Data on the marital status of female respondents at the time of the survey are shown in Table 3.10. Overall, 45 percent of women age 12-49 have never married, while 54 percent are currently married. At age 12-14, the proportion never-married is more than 99 percent, and by age 30-34, marriage is nearly universal for women—only 4 percent have never married. Marital dissolution is rare among Afghan couples. Across all ages, the proportion divorced or separated is very small, less than 1 percent. Widowhood is not evident until age 20 and increases with age. Five percent of women age 40-44 and 8 percent of those age 45-49 are widowed.

Table 3.10 Current marital status

Percent distribution of women age 12-49 by current marital status, according to age, Afghanistan 2010

Age	Marital status: Never married	Married	Divorced	Separated	Widowed	Total	Number of women
12-14	99.5	0.5	0.0	0.0	0.0	100.0	8,382
15-19	82.6	17.3	0.0	0.0	0.0	100.0	11,496
20-24	33.8	65.7	0.0	0.1	0.4	100.0	7,952
25-29	10.1	89.0	0.1	0.1	0.8	100.0	5,901
30-34	3.6	94.8	0.0	0.1	1.6	100.0	4,189
35-39	1.3	95.4	0.1	0.1	3.1	100.0	4,109
40-44	1.0	93.6	0.1	0.1	5.3	100.0	3,198
45-49	0.5	91.2	0.0	0.0	8.3	100.0	2,620
Total 12-49	44.6	53.9	0.0	0.1	1.4	100.0	47,848

3.3.2 Age at First Marriage

Marriage marks the point in a woman's life when childbearing becomes socially acceptable. Age at first marriage has a major effect on childbearing because women who marry early have, on average, a longer period of exposure to the risk of becoming pregnant and a greater number of lifetime births. Information on age at first marriage was obtained by asking respondents for the month and year, or age at which they began living with their first husband.

Table 3.11 presents information on age at first marriage. The table shows the percentage of all women age 12-49 who first married by specified exact ages and the median age at first marriage, according to current age. Marriage occurs relatively early in Afghanistan. Overall, 92 percent of women are married by the time they reach age 25. However, there is strong evidence of a rising age at first marriage in Afghanistan among women below age 35 (Figure 3.4). The proportion married by age 15 declines from 25 percent among women age 30-34 to 4 percent among women age 15-19. Similar declines are seen in the proportions of women married by age 18 and 20. The median age at marriage rises from 16.9 among women age 30-34 to 19.2 among women age 20-24.[3]

[3] The median age at first marriage for women age 15-49 reported in the NRVA 2007/8 is 18 years, which is similar although not strictly comparable to the AMS 2010 median for women age 20-49 (18.1 years).

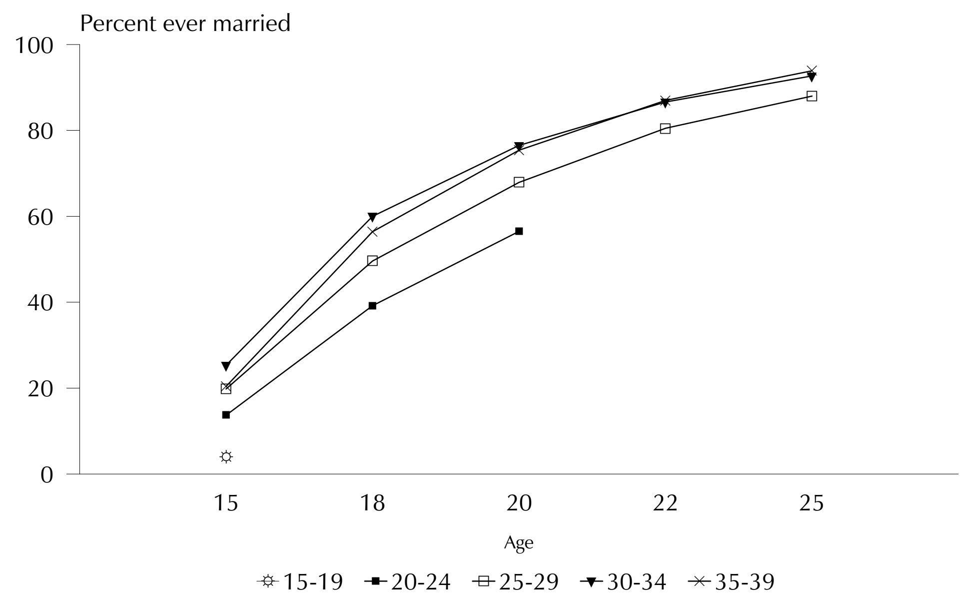
Table 3.11 Age at first marriage

Percentage of women age 12-49 who were first married by specific exact ages and median age at first marriage, according to current age, Afghanistan 2010

Current age	Percentage first married by exact age: 12	15	18	20	22	25	Percentage never married	Number	Median age at first marriage
12-14	0.0	na	na	na	na	na	99.5	8,382	a
15-19	0.3	4.0	na	na	na	na	82.6	11,496	a
20-24	1.3	13.7	39.2	56.5	na	na	33.8	7,952	19.2
25-29	2.0	19.8	49.6	67.9	80.5	88.0	10.1	5,901	18.0
30-34	2.4	25.3	60.0	76.5	86.6	92.7	3.6	4,189	16.9
35-39	1.7	20.4	56.4	75.4	87.0	93.9	1.3	4,109	17.4
40-44	1.9	22.5	51.6	70.9	86.7	94.5	1.0	3,198	17.8
45-49	1.4	18.5	47.5	66.0	81.6	92.3	0.5	2,620	18.3
20-49	1.8	19.2	49.3	67.2	na	na	12.6	27,970	18.1
25-49	2.0	21.3	53.2	71.5	84.3	91.8	4.2	20,017	17.7

Note: The age at first marriage is defined as the age at which the respondent began living with her first husband
na = Not applicable because of censoring
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

Figure 3.4 Trends in Percent First Married at Exact Ages



AMS 2010

Table 3.12 shows the median age at first marriage among women age 20-49 by five-year age groups, according to background characteristics. Among women 20-49, urban women marry about one year later than rural women. Women who live in the South zone marry about one year later than women from the Central and North zones. The median age at marriage ranges from a low of 15.7 years in the Central Highland region to a high of 19.5 years in the South Eastern region—a difference of about 4 years. However, it is important to note here that due to coverage issues the AMS sample for the South zone and regions within it is biased toward urban residents.

A positive correlation can be seen between median age at marriage and both level of education and household wealth. Women with higher education marry almost 5 years later than those with no education. Women in the highest wealth quintile marry almost two years later than those from the lowest wealth quintile. Similarly, women in the least remote quintile marry more than a year later than women in the most remote quintile.

Table 3.12 Median age at first marriage

Median age at first marriage among women age 20-49 by five-year age groups, according to background characteristics, Afghanistan 2010

Background characteristic	Current age 20-24	25-29	30-34	35-39	40-44	45-49	Women age 20-49	Women age 25-49
Residence								
Urban	a	18.7	17.7	17.8	17.7	18.1	18.7	18.0
Rural	18.9	17.9	16.8	17.4	17.9	18.3	17.9	17.6
Zone								
North	19.1	17.4	16.9	16.8	16.8	17.0	17.5	17.0
Central	18.7	17.9	16.6	17.2	17.3	17.9	17.7	17.4
South	19.6	18.6	17.3	18.3	19.2	19.4	18.8	18.5
Region								
North Eastern	18.6	16.9	16.4	16.6	16.3	16.7	17.1	16.6
Northern	19.6	18.0	17.3	17.0	17.3	17.3	17.9	17.4
Western	17.1	16.7	15.8	16.3	16.4	17.5	16.6	16.4
Central Highland	16.0	16.1	15.0	15.7	15.8	16.5	15.7	15.6
Capital	a	19.1	17.9	18.0	18.2	18.5	18.8	18.3
Eastern	19.6	18.0	16.0	17.0	18.5	18.1	18.1	17.5
Southern	19.5	19.2	18.1	18.8	19.7	20.5	19.3	19.2
South Eastern	19.7	19.3	18.6	19.0	19.6	20.5	19.5	19.3
Education								
No education	18.8	17.9	16.8	17.3	17.7	18.2	17.9	17.5
Madrassa	19.5	18.4	16.8	17.4	16.9	18.4	18.3	17.7
Primary	19.7	18.5	17.2	17.8	17.9	18.0	18.5	17.9
Secondary	a	19.8	18.8	18.5	18.4	20.0	a	19.0
Higher	a	a	21.3	21.1	20.2	21.7	a	22.3
Wealth quintile								
Lowest	17.2	16.9	16.0	16.6	16.9	17.2	16.8	16.6
Second	18.8	17.6	16.2	16.8	17.1	17.5	17.5	17.0
Middle	19.3	17.7	17.2	17.7	18.4	18.9	18.2	17.9
Fourth	19.6	18.6	17.3	18.2	18.7	19.1	18.7	18.3
Highest	a	19.3	18.2	18.2	18.1	18.1	19.0	18.5
Remoteness quintile								
Most remote	18.3	17.6	16.6	17.0	17.1	17.4	17.5	17.2
Second	19.4	18.0	16.7	17.5	17.9	18.3	18.1	17.6
Middle	19.4	18.1	17.1	17.6	18.0	19.0	18.3	17.9
Fourth	19.6	18.4	17.0	17.5	18.2	18.3	18.4	17.9
Least remote	a	18.7	18.0	18.1	18.2	18.5	18.7	18.3
Total	19.2	18.0	16.9	17.4	17.8	18.3	18.1	17.7

Note: The age at first marriage is defined as the age at which the respondent began living with her first husband
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

3.4 FAMILY PLANNING

Family planning continues to be a priority highlighted in the National Health and Nutrition Sector Strategy and the National Reproductive Health Strategy. The objectives of the National Family Planning Program include gradually reducing the population growth rate; promoting the concept of a small family norm to the population in general and to the rural population in particular; increasing the availability of and the demand for family planning services; providing quality services; and reducing unmet need. The National Family Planning Program also aims to expand and sustain adequate family planning services at the community level by utilizing all health facilities, community health workers, women's action groups, and community and religious leaders (*imams* and *mullahs*). The private sector and NGOs have also been encouraged to play a more effective role in the National Family Planning Program (Sato, 2007).

The following sections appraise the knowledge and use of various contraceptive methods. This information is of practical use to policy makers and program administrators in formulating effective family planning strategies. Wherever possible, comparisons are made with findings from previous surveys to evaluate changes in family planning in Afghanistan over time.

3.4.1 Knowledge of Family Planning Methods

Knowledge of contraceptive methods is an important precursor to use. The AMS 2010 collected information from currently married women[4] on nine modern family planning methods—female and male sterilization, the pill, the IUD, injectables, implants, male condoms, lactational amenorrhea (LAM), and emergency contraception—and two traditional methods—the rhythm method and withdrawal. Folk methods, such as plants and herbs, were mentioned spontaneously by some respondents.

Table 3.13 Knowledge of contraceptive methods

Percentage of currently married women age 15-49 who know any contraceptive method, by specific method, Afghanistan 2010

Method	Currently married women
Any method	91.8
Any modern method	91.6
Female sterilization	39.1
Male sterilization	15.0
Pill	86.0
IUD	55.8
Injectables	83.2
Implants	23.5
Male condom	58.5
Lactational amenorrhea (LAM)	52.1
Emergency contraception	13.2
Any traditional method	45.4
Rhythm	25.0
Withdrawal	34.8
Folk method	1.7
Mean number of methods known by respondents 15-49	4.9
Number of respondents	25,738

Information about knowledge of contraceptive methods is presented in Table 3.13 for all currently married women by specific methods.[5] More than nine in ten currently married women in Afghanistan know of a method of contraception, and women are twice as likely to mention knowing a modern method as a traditional method (92 percent and 45 percent, respectively). On average, women know of five different contraceptive methods. The most widely known modern contraceptive methods among currently married women are the pill and injectables (86 and 83 percent, respectively). Male sterilization and emergency contraception were the least known modern methods. Among traditional methods, over a third of women mentioned the withdrawal method.

Table 3.14 shows knowledge of contraceptives by background characteristics. Knowledge of family planning rises with age to peak at 93 percent among women age 25-34 and then declines slightly. Even among the oldest age group knowledge is very high (91 percent). Rural women are less likely to have heard of a method than urban women (90 percent versus 98 percent). Women from the Central zone are most likely to have heard of a method (96 percent) and those from the South zone least likely (86 percent). Region wise, knowledge is highest in the Western region (97 percent) and lowest in the South Eastern region (75 percent). Knowledge of family planning methods rises with women's education from 91 percent among women with no education to 98 percent among women with higher education. The relationship between household wealth and knowledge of family planning is U-shaped being lowest among women in the middle wealth quintile and highest among those in the highest wealth quintile. A similar pattern is seen between knowledge and remoteness quintile.

[4] Questions on knowledge and use of contraceptive methods were not asked of six currently married women who had not begun sexual intercourse at the time of the survey.

[5] Tables on contraceptive knowledge and use exclude 40 currently married women age 12-14; including them results in minimal changes to these tables.

Table 3.14 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Afghanistan 2010

Background characteristic	Heard of any method	Heard of any modern method	Number
Age			
15-19	84.9	84.8	1,989
20-24	91.9	91.7	5,227
25-29	93.1	92.9	5,250
30-34	93.4	93.2	3,970
35-39	92.3	92.0	3,922
40-44	91.9	91.6	2,991
45-49	90.8	90.7	2,389
Residence			
Urban	97.6	97.3	4,932
Rural	90.4	90.2	20,806
Zone			
North	93.7	93.6	7,781
Central	96.0	95.7	9,110
South	85.9	85.6	8,847
Region			
North Eastern	91.2	91.2	3,823
Northern	96.1	95.9	3,958
Western	97.3	97.0	3,404
Central Highlands	95.0	95.0	915
Capital	95.2	94.9	4,790
Eastern	93.4	93.2	4,497
Southern	81.5	80.7	1,962
South Eastern	75.3	75.3	2,388
Education			
No education	91.2	91.0	22,622
Madrassa	95.5	95.3	289
Primary	95.8	95.5	1,485
Secondary	96.9	96.6	1,062
Higher	98.1	97.5	280
Wealth quintile			
Lowest	91.4	91.2	5,112
Second	91.6	91.4	5,328
Middle	89.1	88.7	5,057
Fourth	90.8	90.6	5,153
Highest	96.3	96.0	5,088
Remoteness quintile			
Most remote	91.7	91.5	6,619
Second	93.7	93.5	7,255
Middle	88.7	88.3	5,110
Fourth	91.0	90.9	4,187
Least remote	94.3	93.8	2,567
Total 15-49	91.8	91.6	25,738

It is possible to compare the AMS 2010 data on contraceptive knowledge among rural women to results from the MICS 2003 and the AHS 2006. The comparison suggests that knowledge of family planning has increased markedly in the past 7 years. The 2003 MICS survey showed that 22 percent of ever-married rural women less than 50 years had heard of a method of family planning (CSO and UNICEF, 2004) compared with 37 percent of currently married rural women age 10-49 in the AHS 2006 (JHUBSPH and IIHMR, 2008) and 90 percent of rural women in the AMS 2010. However, some caution must be exercised in interpreting the large difference between knowledge of a method of family planning between the AMS 2010 results and the AHS 2006 and the MICS 2003 findings since at least some of the difference may be due to differences in the way questions on contraceptive knowledge were posed. The AHS 2006 and the MICS 2003 asked a general question on whether currently married women had heard of a method of family planning, and if they responded in the affirmative, they were asked to name the method they had heard of, and probed for any additional methods that they may have heard but did not mention. In contrast, the AMS 2010 asked currently married women if they had heard of each of the nine modern methods and two traditional methods by mentioning the name of each method separately followed by a description of each method.

3.4.2 Current Use of Contraception

Current use of contraception is defined as the percentage of women who reported that they were using a family planning method. The level of current use—usually calculated among currently married women—is the most widely used and valuable measure of the success of family planning programs. Table 3.15 shows the percent distribution by age of currently married women by the specific family planning methods they were using at the time of the interview. More than one-fifth of currently married women use some method of family planning (22 percent), with the vast majority (20 percent) using a modern method. The most common method currently used is injectables (7 percent), followed by the pill (5 percent) and LAM (4 percent). Among traditional methods, the most commonly used method is withdrawal, which is used by 1 percent of currently married women.

Contraceptive use varies by age. Use is lowest in the youngest age group, presumably because these women are in the early stages of family building. Current use of any method rises steadily from 9 percent among women age 15-19, peaks at 29 percent among women age 35-39, and falls slightly to 28 percent among women age 40-44 and then to 21 percent among the oldest age group. Female sterilization is most used by women age 35 and older, while injectables, the pill and LAM are used by all age groups.

Table 3.15 Current use of contraception by age

Percent distribution of currently married women age 15-49, by contraceptive method currently used, according to age, Afghanistan 2010

			Modern method									Traditional method					
Age	Any method	Any modern method	Female sterili-zation	Male sterili-zation	Pill	IUD	Inject-ables	Implants	Male con-dom	LAM	Any tradi-tional method	Rhythm	With-drawal	Folk method	Not currently using	Total	Number of women
15-19	9.0	8.0	0.0	0.0	2.1	0.2	1.2	0.0	0.9	3.5	1.0	0.3	0.7	0.0	91.0	100.0	1,989
20-24	15.9	14.5	0.0	0.0	4.4	0.8	2.8	0.1	1.9	4.6	1.4	0.2	1.1	0.1	84.1	100.0	5,227
25-29	21.2	19.3	0.4	0.0	5.0	1.3	5.8	0.0	2.1	4.6	2.0	0.4	1.4	0.2	78.8	100.0	5,250
30-34	25.7	23.3	0.6	0.0	5.7	1.7	8.5	0.0	2.3	4.3	2.4	0.4	1.7	0.3	74.3	100.0	3,970
35-39	29.0	26.6	2.3	0.1	7.3	1.7	10.0	0.1	1.8	3.3	2.4	0.3	1.8	0.3	71.0	100.0	3,922
40-44	28.0	25.4	3.8	0.1	7.4	1.8	9.3	0.1	1.2	1.5	2.7	0.4	1.7	0.5	72.0	100.0	2,991
45-49	20.9	19.5	4.3	0.2	4.2	1.6	7.8	0.1	0.5	0.7	1.4	0.1	0.8	0.5	79.1	100.0	2,389
Total	21.8	19.9	1.4	0.0	5.3	1.3	6.5	0.1	1.7	3.6	1.9	0.3	1.4	0.3	78.2	100.0	25,738
Total (excluding South zone)	24.9	22.5	1.7	0.0	6.0	1.4	7.2	0.0	2.0	4.0	2.4	0.4	1.9	0.1	75.1	100.0	16,891

3.4.3 Current Use of Contraception by Background Characteristics

The study of differentials in current use of contraception is important because it helps to identify subgroups of the population to target for family planning services. Table 3.16 presents the percent distribution of currently married women by their current use of family planning methods, according to background characteristics. This table allows comparison of levels of current contraceptive use among major population groups. It also permits an examination of differences in the method mix among current users within the various subgroups.

Table 3.16 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Afghanistan 2010

Background characteristic	Any method	Any modern method	Modern method: Female sterili-zation	Modern method: Male sterili-zation	Modern method: Pill	Modern method: IUD	Modern method: Inject-ables	Modern method: Implants	Modern method: Male condom	Modern method: LAM	Modern method: Other modern	Any tradi-tional method	Traditional method: Rhythm	Traditional method: With-drawal	Traditional method: Folk method	Not current-ly using	Total	Number of women
Residence																		
Urban	36.4	31.2	2.4	0.1	7.7	3.4	7.9	0.1	5.4	3.9	0.1	5.2	0.6	4.3	0.3	63.6	100.0	4,932
Rural	18.4	17.2	1.1	0.0	4.8	0.8	6.2	0.0	0.8	3.5	0.0	1.2	0.2	0.7	0.2	81.6	100.0	20,806
Zone																		
North	14.8	13.2	0.8	0.0	3.5	0.6	6.1	0.0	1.0	1.2	0.0	1.6	0.2	1.3	0.1	85.2	100.0	7,781
Central	33.6	30.5	2.6	0.1	8.1	2.2	8.1	0.1	2.9	6.5	0.0	3.0	0.5	2.3	0.2	66.4	100.0	9,110
South	16.0	14.9	0.7	0.0	4.1	1.1	5.2	0.1	1.1	2.6	0.0	1.1	0.1	0.4	0.5	84.0	100.0	8,847
Region																		
North Eastern	14.6	14.1	0.4	0.0	3.6	0.4	8.1	0.0	0.5	1.1	0.0	0.4	0.1	0.2	0.1	85.4	100.0	3,823
Northern	15.0	12.2	1.2	0.0	3.3	0.7	4.2	0.0	1.5	1.3	0.0	2.8	0.3	2.3	0.1	85.0	100.0	3,958
Western	33.0	29.7	2.4	0.1	7.9	1.6	7.2	0.1	2.2	8.2	0.0	3.4	0.9	2.4	0.1	67.0	100.0	3,404
Central Highlands	35.6	35.4	0.8	0.0	17.4	1.0	15.2	0.0	0.6	0.4	0.0	0.2	0.0	0.0	0.2	64.4	100.0	915
Capital	33.6	30.2	3.0	0.1	6.5	2.8	7.3	0.1	3.9	6.4	0.1	3.4	0.4	2.8	0.2	66.4	100.0	4,790
Eastern	15.7	15.0	0.7	0.0	3.0	0.9	5.4	0.2	0.7	4.2	0.0	0.8	0.1	0.5	0.2	84.3	100.0	4,497
Southern	24.1	22.5	0.9	0.1	7.4	2.4	7.3	0.1	2.2	2.1	0.0	1.6	0.4	0.7	0.6	75.9	100.0	1,962
South Eastern	9.6	8.5	0.4	0.0	3.4	0.4	3.2	0.0	0.9	0.2	0.0	1.2	0.0	0.1	1.0	90.4	100.0	2,388
Education																		
No education	20.0	18.5	1.3	0.0	5.0	1.0	6.5	0.1	1.2	3.5	0.0	1.5	0.3	1.0	0.3	80.0	100.0	22,622
Madrassa	25.3	24.0	0.2	0.5	10.5	1.2	5.1	0.0	1.8	4.7	0.0	1.4	0.4	0.8	0.2	74.7	100.0	289
Primary	33.0	29.0	2.3	0.1	7.7	3.2	6.1	0.0	4.8	4.8	0.0	4.0	0.7	3.3	0.1	67.0	100.0	1,485
Secondary	37.7	31.5	2.7	0.1	8.6	3.9	6.2	0.1	6.1	3.7	0.1	6.1	0.5	5.6	0.1	62.3	100.0	1,062
Higher	44.6	34.8	1.8	0.4	4.5	6.5	7.6	0.2	10.9	2.6	0.3	9.8	1.4	8.5	0.0	55.4	100.0	280
Number of living children																		
0	0.9	0.8	0.0	0.0	0.1	0.0	0.4	0.0	0.3	0.0	0.0	0.1	0.0	0.1	0.0	99.1	100.0	2,889
1-2	16.9	15.0	0.4	0.0	4.2	0.8	3.1	0.0	2.1	4.4	0.0	1.9	0.3	1.4	0.1	83.1	100.0	6,225
3-4	24.4	22.3	1.3	0.0	6.4	1.7	6.0	0.0	2.2	4.6	0.0	2.2	0.3	1.7	0.1	75.6	100.0	6,225
5+	29.1	26.7	2.4	0.1	6.8	1.8	10.5	0.1	1.5	3.5	0.0	2.3	0.3	1.5	0.5	70.9	100.0	10,399
Wealth quintile																		
Lowest	17.1	16.2	0.4	0.0	4.7	0.5	7.4	0.0	0.4	2.8	0.0	0.8	0.3	0.5	0.0	82.9	100.0	5,112
Second	19.8	18.7	1.5	0.0	4.8	0.5	6.3	0.0	0.9	4.8	0.0	1.1	0.3	0.6	0.1	80.2	100.0	5,328
Middle	17.8	16.6	1.2	0.0	3.7	1.1	5.4	0.1	1.0	4.1	0.0	1.2	0.2	0.7	0.3	82.2	100.0	5,057
Fourth	20.7	18.9	1.3	0.1	5.8	1.3	6.1	0.1	1.5	2.7	0.0	1.8	0.2	1.1	0.5	79.3	100.0	5,153
Highest	34.0	29.2	2.4	0.1	7.6	3.4	7.3	0.1	4.9	3.3	0.1	4.8	0.5	3.9	0.4	66.0	100.0	5,088
Remoteness quintile																		
Most remote	18.4	17.2	1.0	0.1	5.1	0.8	5.6	0.0	1.0	3.7	0.0	1.2	0.2	0.9	0.1	81.6	100.0	6,619
Second	22.9	21.3	1.2	0.0	5.8	1.1	8.1	0.0	1.2	3.8	0.0	1.5	0.2	0.9	0.3	77.1	100.0	7,255
Middle	21.3	19.0	1.7	0.0	4.9	1.4	6.0	0.1	1.7	3.3	0.0	2.3	0.4	1.6	0.3	78.7	100.0	5,110
Fourth	21.6	19.1	1.3	0.1	4.5	1.7	5.9	0.1	2.5	3.0	0.0	2.5	0.3	2.0	0.3	78.4	100.0	4,187
Least remote	29.3	26.0	2.3	0.1	6.7	2.6	6.3	0.1	3.6	4.3	0.0	3.3	0.6	2.6	0.1	70.7	100.0	2,567
Total	21.8	19.9	1.4	0.0	5.3	1.3	6.5	0.1	1.7	3.6	0.0	1.9	0.3	1.4	0.3	78.2	100.0	25,738

There are substantial differences in the use of contraceptive methods among subgroups of currently married women. Urban women are twice as likely to use a method of family planning as are rural women (36 percent and 18 percent, respectively), probably reflecting wider availability and easier access to methods in urban areas than in rural areas. The contraceptive prevalence rate for modern methods is 31 percent in urban areas, compared with 17 percent in rural areas.

Contraceptive use is more than twice as high in the Central zone as in the North and South zones. Use is lowest in the South Eastern region (10 percent) and highest in the Central Highland region (36 percent), with use higher than the national average in four of the eight regions (Western, Central Highland, Capital, and Southern regions). The low use in the South Eastern region may be due not only to the limited availability of contraceptives but also difficulty in gaining access to methods and lower awareness and educational level, coupled with the prevailing cultural and traditional barriers in this region.

The relationship between education and contraceptive use is strong. Use increases rapidly from 20 percent among married women with no education to 45 percent among women with higher education. Even a small amount of schooling can make a difference. One-third of women with some primary education use contraception. The most popular methods among women who have no education are injectables (7 percent) and pills (5 percent). As women's level of education increases they are more likely to use IUDs and condoms.

Wealth has a positive relationship with women's contraceptive use. Contraceptive use increases markedly with household wealth, from 17 percent among currently married women in the lowest wealth quintile to 34 percent among those in the highest wealth quintile.

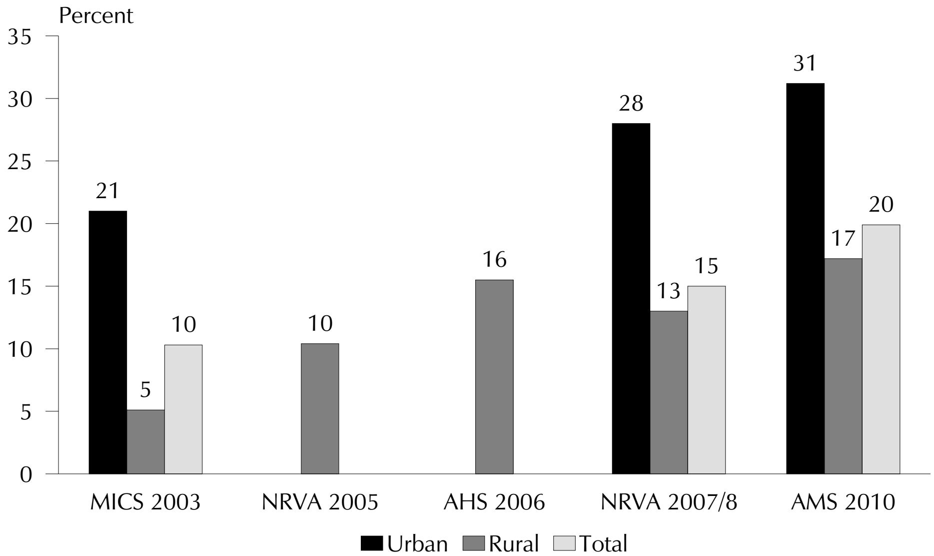
There is a direct association between use of family planning methods and the number of children that women have. Less than 1 percent of married women with no living children use contraception; this percentage increases to 29 percent among women with five or more children. Use of female sterilization increases somewhat with the number of living children a woman has, but pills and injectables remain the most popular methods for women with three or more children.

Not surprisingly, remoteness has a negative effect on women's contraceptive use. Contraceptive use decreases markedly as remoteness increases, from 29 percent among currently married women in the least remote quintile to 18 percent among those in the most remote quintile.

3.4.4 Trend in Current Use of Contraception

Information on contraceptive prevalence from the AMS 2010 can be compared with similar data from earlier surveys conducted in Afghanistan (Figure 3.5). However, these comparisons have to be interpreted carefully because of coverage differences and differences in the way the questions on contraceptive knowledge and use were asked between these surveys. In addition, when reviewing the changes in the use of modern versus traditional methods between surveys, consideration must be given to the fact that in the AMS 2010 LAM is tabulated as a modern method in contrast to the NRVA 2007/8 and the AHS 2006 in which LAM is treated as a traditional method. There has been a marked increase in the use of a contraceptive method among currently married women in the past 7 years with the increase more rapid between 2003 and 2006 than in the more recent years. The AHS 2006 survey found 16 percent of currently married rural women using a modern method of contraception (JHUBSPH and IIHMR, 2008), a three-fold increase in use of modern methods in rural Afghanistan since 2003 (CSO and UNICEF, 2004). However, since 2006, the use of modern methods among currently married rural women appears to have stagnated. The NRVA 2007/8 showed that 15 percent of currently married women (including Kuchi women) were using a modern method of family planning (ICON-INSTITUTE, 2009) compared with 20 percent in the AMS 2010. Use of a modern method in urban areas (28 percent) is more than twice as high as in rural areas (13 percent) in the NRVA 2007/8 with similar proportions seen in the AMS 2010 (31 percent of urban women and 17 percent of rural women). The MICS 2003 did not provide information by type of method.

Figure 3.5 **Trends in Modern Contraceptive Use in Afghanistan**



Note: MICS 2003 urban and total refers to all methods.

AMS 2010

3.5 CONSISTENCY BETWEEN THE TFR AND PROXIMATE DETERMINANTS OF FERTILITY

The level of fertility is principally determined by three proximate determinants, age at first marriage, contraceptive use, and postpartum infecundability (which is mostly influenced by the duration and intensity of breastfeeding).[6] Bongaarts proposed a model where the total fertility rate of a population can be calculated from four indices of proximate determinants and the total fecundity (TF): the index of marriage (Cm), the index of contraception (Cc), the index of induced abortion (Ca) and the index of postpartum infecundability (Ci) (Bongaarts, 1978). These indices range from 0 to 1. The higher each index, the higher the TFR will be. The proximate determinants of fertility model can be applied to the AMS 2010 data to indicate whether the TFR in Afghanistan is consistent with the measures of the proximate determinants. The TFR predicted by the model for Afghanistan is only slightly higher than the measured TFR, indicating compatibility between the level of fertility and the level of proximate determinants, and internal consistency in the data collected from the AMS 2010 (Table 3.17).[7] The TFR and implied fertility are exactly the same (5.0) in Afghanistan excluding the South zone.

[6] Because the AMS 2010 did not collect information on breastfeeding status, the index of postpartum infecundability was calculated by assuming that children were breastfeeding if the time since birth of the child was less than 7 months and the child was currently living with the mother at the time of the survey.
[7] There is a fourth proximate determinant in the Bongaarts model, induced abortion, which is not included here (assumed to be 1.0). However, even in countries with very high levels of induced abortion, such as those of the former Soviet Union, the effect on fertility is quite small, due to the relatively short time that an abortion protects a woman from becoming pregnant again.

Table 3.17 Total fertility rate and the proximate determinants of fertility	Total fertility rate (TFR)	Index of marriage (Cm)	Index of contra-ception (Cc)	Index of postpartum infecundi-bility (Ci)	Cm×Cc×Ci	Predicted total fecundity (TF)	Total marital fertility (TMF)	Total natural fertility (TNF)	Implied fertility
Afghanistan	5.1	0.72	0.54	0.89	0.34	14.90	7.13	13.23	5.3
Afghanistan (excluding South zone)	5.0	0.72	0.52	0.89	0.33	15.29	6.98	13.53	5.0
South[1] zone	5.3	0.72	0.51	0.89	0.33	16.18	7.43	14.45	5.1

[1] The total fecundity rate is 15.3 births per woman if there is no effect of any of the proximate determinants. For example, given the values of the proximate determinants of 0.34 (CmxCcxCi) for Afghanistan, the model predicts an implied fertility of 5.3 (0.34x15.3) births per woman.

3.6 CONCLUSION

A complete birth history in the AMS 2010 produced direct estimates of fertility for the first time in Afghanistan. The total fertility rate for Afghanistan for the three years preceding the AMS 2010 is 5.1 children per woman. As expected, fertility is higher in rural areas than urban areas. Fertility also varies by region with women in the Eastern region having on average one child more than women in the Central Highland region. Education makes a huge impact on fertility: women with higher education have on average two and half children less than women with no education. Fertility has dropped substantially among all age groups in the past 15 years. This is supported by trend data within the AMS 2010 and corroborated by data from the NRVA 2007/8.

Data from the AMS 2010 show that marriage occurs relatively early in Afghanistan, with the vast majority of women married by the time they reach age 25. However, there is strong evidence of a rising age at first marriage among women below age 35. Women age 30-34 were six times more likely to be married by age 15 than women age 15-19. The median age at marriage varies widely within the country with a 4 year difference between the lowest age at which women first marry found in the Central Highlands and the highest found in the South Eastern region. There is a positive correlation between age at marriage and level of education, household wealth and remoteness.

More than nine in ten currently married women in Afghanistan know of a method of contraception, and women are twice as likely to mention knowing a modern method as a traditional method. On average, women know of five different contraceptive methods. The most widely known modern contraceptive methods among currently married women are the pill and injectables. Knowledge of family planning has increased markedly in the past 7 years.

More than one-fifth of currently married women use some method of family planning, with the vast majority using a modern method. The most common method currently used is injectables, followed by the pill and LAM. Urban women are twice as likely to use a method of family planning as are rural women. Use is lowest in the South Eastern region and highest in the Central Highland region. Contraceptive use increases rapidly with women's education and wealth. There has been a marked increase in the use of a contraceptive method among currently married women in the last 7 years with the increase more rapid between 2003 and 2006 than in the more recent years.

Data from the AMS 2010 are internally consistent as evidenced by the fact that little difference was found between the actual fertility and implied fertility when the Bongaarts proximate determinants model was applied. A review of several data quality measures found some evidence of omission in the AMS birth data, especially of female births in the South zone. The pattern of omission as well as the underrepresentation of households from rural areas, particularly in the South zone, suggest that the level of fertility may be underestimated to some degree in the AMS. However, nothing in the data quality analysis indicates that the biases introduced by these problems are very large. Therefore, the AMS results provide a relatively robust but not perfect picture of fertility patterns in Afghanistan.

MATERNAL HEALTH 4

Afghanistan is committed to achieving Millennium Development Goal 5 which targets a reduction in the maternal mortality ratio (MMR) by 50 percent between 2002 and 2015, and further reduction to 25 percent of the 2002 level by 2020 (UNDP/GIRoA, 2008). To this end, the Ministry of Public Health (MoPH) has been working closely with the United Nations, USAID, other development partners and NGOs for the improvement of maternal and newborn health in Afghanistan. The MoPH has undertaken a number of other major interventions to strengthen maternal and neonatal health care, such as developing standards and guidelines for maternal care, training midwives and doctors, strengthening the health infrastructure, providing supplies and equipment, developing information materials, conducting campaigns, and conducting surveys related to the implementation of pilot projects and initiatives in maternal and newborn health.

A key concern in the policies and strategies that the MoPH has adopted is broadening access to maternal care. One element of this effort has been directed toward ensuring that basic health services and emergency obstetric care (EMOC) are available at basic health centers (BHCs) and that more comprehensive care is offered at comprehensive health centers (CHCs), district hospitals (DHs), and specialized maternity hospitals, which are known as centers of excellence for maternal care provision.

With regard to access to care, improvements in the availability of skilled staff have been an important element. In this regard, in 2003 the MoPH reported a severe shortage of skilled birth attendants (SBAs) and midwives in the country. In response, donors including the USAID, the Dutch government, the World Bank and the European Commission assisted the MoPH to establish two programs to train and graduate new midwives: the Institutes of Health Sciences (IHS) program designed to train midwives to practice at the provincial, regional and national/specialty hospitals; and the Community Midwifery Education (CME) outreach program for community-based care. Between 2002 and 2011, 34 schools (4 IHS and 30 CME) were established in 31 provinces to serve women in all 34 provinces and there has been a seven-fold increase in the number of midwives trained from 467 to 3,275 (AMNEAB, 2011). According to the newly released State of the World's Midwifery (SOWM) report, there were 2,331 midwives, nurse/midwives and nurses with midwifery competencies and an additional 254 auxiliary midwives and auxiliary nurse/midwives in the labor force in 2008 (UNFPA, 2011).

There is evidence that the effort to expand access to health care is succeeding. For example, the NRVA 2007/8 estimated that in 2008, the large majority of the Afghan population (85 percent) was within one hour's distance of a public health facility by any means of transport (ICON-INSTITUTE, 2009). Assessment of health services in 2008 using the Balanced Score Card (BSC) approach found that women were more likely than men to access services (JHUBSPH and IIHMR, 2009). The study also found that the proportion of BPHS facilities providing antenatal care on a routine basis had increased steadily from 2004 to 2008 and was at an all time high of 95 percent. Although the score for provision of delivery care in health facilities was lower than for antenatal care, the national median proportion of facilities providing delivery care according to the BPHS standards, increased by 18 percent in one year, from 60 percent in 2007 to 71 percent in 2008.

This chapter reviews information collected in the AMS 2010 on antenatal, delivery, and postnatal care, as well as on problems in accessing health care. These data are useful both in the continuing effort to assess the progress Afghanistan is making in improving the coverage of maternal health services and in planning for future improvements in maternal care.

4.1 ANTENATAL CARE

The quality of antenatal care (ANC) can be assessed by the type of provider, the number of ANC visits, and the timing of the first visit. ANC can also be monitored through the content of services received and information given to mothers during their visit. In the AMS 2010, information relating to these aspects in the care received during at least one visit while pregnant was obtained from women for their most recent birth if it occurred in the five years preceding the survey.

4.1.1 Antenatal Care Coverage

Table 4.1 shows the percent distribution of mothers age 12-49 who had a live birth in the five years preceding the survey, by source of ANC received during pregnancy, according to selected characteristics. Women were asked to report on all persons they saw for ANC during pregnancy for the most recent birth. However, for presenting the results, if a woman saw more than one provider, only the provider with the highest qualification was considered.

Three in five mothers (60 percent) received ANC from skilled birth attendants (SBAs), that is, a doctor or nurse/midwife, for their most recent birth in the five years preceding the survey. In addition, 3 percent of mothers received ANC from a community health worker (CHW) or traditional birth attendant (TBA). Thirty-seven percent of women received no ANC at all.

Mothers less than 34 years are more likely to receive ANC from a doctor than older mothers (age 35-49). Mothers are also much more likely to receive care from an SBA for their first birth (64 percent) than for births of order 6 and higher (57 percent).There are large differences in the use of ANC services between urban and rural women. Eighty-five percent of urban mothers receive ANC from an SBA, compared with only 54 percent of rural mothers. The percentage of women receiving ANC is almost the same in the North (65 percent) and Central (62 percent) zones, with ANC from an SBA in the South zone much lower (52 percent). At the regional level, the percentage of mothers receiving ANC ranges from a low of 42 percent in the Western region to a high of 79 percent in the Capital region. The use of ANC services from an SBA strongly relates to the mother's level of education. Women with the highest level of education are more likely to receive ANC from an SBA (89 percent) than women with no education (57 percent). Women in the highest wealth quintile are more likely to receive care from an SBA (78 percent) than women in the lowest wealth quintile (44 percent). Similarly, women in the least remote quintile are more likely to receive care from an SBA (77 percent) than women in the most remote quintile (55 percent).

Table 4.1 Antenatal care

Percent distribution of women age 12-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Afghanistan 2010

Background characteristic	Doctor	Nurse/ midwife	Com-munity health worker	Traditional birth attendant	Other	No one	Missing	Total	Percent-age receiving antenatal care from a skilled provider[1]	Number of women
Mother's age at birth										
<20	36.3	24.2	0.4	2.8	0.2	36.0	0.0	100.0	60.5	2,334
20-34	35.1	25.2	0.4	2.6	0.2	36.4	0.1	100.0	60.3	11,934
35-49	32.1	23.8	0.5	2.2	0.1	40.9	0.5	100.0	55.8	2,730
Birth order										
1	39.7	24.6	0.4	2.9	0.1	32.2	0.1	100.0	64.3	2,411
2-3	35.3	25.6	0.3	2.5	0.2	36.0	0.1	100.0	60.8	4,959
4-5	34.8	24.2	0.5	2.6	0.2	37.6	0.2	100.0	58.9	4,152
6+	32.2	24.8	0.3	2.4	0.2	39.8	0.3	100.0	57.0	5,475
Residence										
Urban	59.9	25.0	0.5	0.4	0.1	13.8	0.3	100.0	84.9	3,245
Rural	28.8	24.8	0.4	3.1	0.2	42.6	0.2	100.0	53.6	13,753
Zone										
North	31.2	33.6	0.1	1.9	0.1	33.0	0.1	100.0	64.8	5,346
Central	37.8	24.2	0.6	4.1	0.3	32.7	0.2	100.0	62.0	5,965
South	34.9	17.3	0.4	1.5	0.1	45.5	0.3	100.0	52.2	5,687
Region										
North Eastern	23.0	34.8	0.0	1.3	0.0	40.7	0.1	100.0	57.8	2,612
Northern	39.0	32.5	0.2	2.4	0.1	25.6	0.1	100.0	71.5	2,734
Western	23.9	17.8	0.9	8.0	0.3	49.1	0.1	100.0	41.7	2,269
Central Highland	36.0	14.1	0.2	3.6	0.0	46.0	0.2	100.0	50.0	557
Capital	48.3	30.6	0.5	1.5	0.4	18.5	0.2	100.0	78.9	3,139
Eastern	37.1	14.8	0.3	1.4	0.2	46.1	0.1	100.0	51.9	3,045
Southern	22.2	37.4	1.0	2.4	0.3	35.9	0.9	100.0	59.6	1,097
South Eastern	39.6	7.8	0.0	1.2	0.0	51.3	0.1	100.0	47.4	1,545
Mother's education										
No education	32.0	24.8	0.4	2.6	0.2	39.8	0.2	100.0	56.9	14,982
Madrassa	35.9	21.8	0.7	3.7	0.5	37.3	0.0	100.0	57.7	198
Primary	52.5	26.2	0.3	2.6	0.3	17.9	0.2	100.0	78.6	1,001
Secondary	60.6	25.8	0.0	2.0	0.0	11.4	0.1	100.0	86.4	653
Higher	71.9	17.2	0.0	0.0	0.0	10.9	0.0	100.0	89.1	164
Wealth quintile										
Lowest	23.3	20.7	0.3	4.5	0.0	51.1	0.1	100.0	44.0	3,543
Second	26.2	31.5	0.6	3.1	0.3	38.1	0.2	100.0	57.7	3,509
Middle	31.1	28.6	0.3	2.4	0.2	37.3	0.2	100.0	59.7	3,272
Fourth	38.6	21.6	0.3	1.7	0.3	37.3	0.1	100.0	60.2	3,403
Highest	56.1	21.8	0.5	0.9	0.0	20.4	0.3	100.0	77.9	3,270
Remoteness quintile										
Most remote	30.1	25.0	0.4	2.7	0.1	41.5	0.2	100.0	55.2	4,511
Second	33.1	24.3	0.3	3.5	0.2	38.5	0.1	100.0	57.3	4,737
Middle	31.3	25.4	0.4	2.7	0.3	39.5	0.3	100.0	56.7	3,310
Fourth	41.2	22.7	0.2	1.5	0.1	34.3	0.1	100.0	63.9	2,789
Least remote	48.3	28.5	1.0	1.0	0.1	20.9	0.3	100.0	76.8	1,651
Total	34.8	24.8	0.4	2.6	0.2	37.1	0.2	100.0	59.6	16,998
Total (excluding South zone)	34.7	28.7	0.4	3.1	0.2	32.8	0.1	100.0	63.4	11,311

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications was considered in this tabulation.
[1] Skilled provider includes doctor or nurse/midwife.

As noted earlier in this chapter, the proportion of health facilities offering ANC care increased very rapidly during the period 2004-2008, from 62 percent to 95 percent (JHUBSPH and IIHMR, 2009). The AMS 2010 sample is sufficiently large to allow for a more detailed examination of how women's use of ANC services changed during the five-year period before the survey, i.e., roughly the calendar year period 2006-2010 (1385-1389 in the Afghan calendar). As Figure 4.1 shows, the proportion of women receiving ANC care from an SBA increased from 57 percent in the period 36-59 months before the survey to 68 percent in the year immediately prior to the survey. The gains in coverage were observed in both urban and rural areas.

Figure 4.1 **Trends in Antenatal Care from a Medically Skilled Provider by Urban-Rural Residence, Afghanistan 2010**

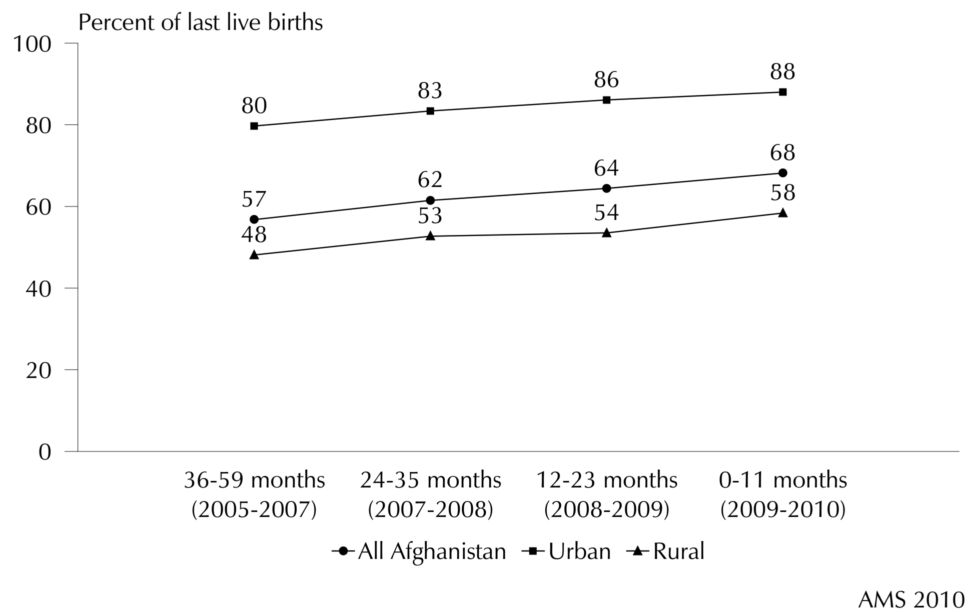
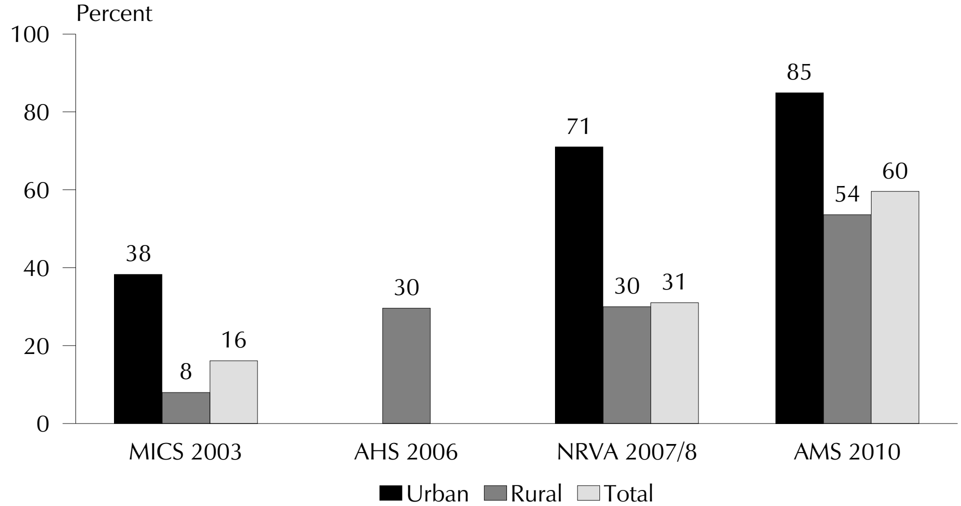


Figure 4.2, which compares the AMS 2010 results with other surveys conducted in Afghanistan since the beginning of the decade (CSO and UNICEF, 2004; JHUBSPH and IIHMR, 2008; ICON-INSTITUTE, 2009), further documents the rapid growth in the use of ANC as access to these services in Afghan health facilities expanded.[1] Overall, ANC utilization appears to have more than tripled during the period between the MICS 2003 and the AMS 2010. The increased access to services was especially marked in rural Afghanistan, where the MICS 2003 found that only 8 percent of women who gave birth in the two-year period prior to the survey had received ANC from a skilled provider.

[1] Some caution should be used in interpreting the trend results since the surveys vary with respect to sample coverage, the manner in which questions were asked, the reference period for which the results apply and other factors. In particular, the trend in rural areas may be somewhat overstated in the AMS 2010 results as 16 percent of the rural population, largely in the South zone, could not be interviewed due to security concerns. These women likely have more limited access to services than the rural women who could be interviewed. Nevertheless, taken together, findings from the various surveys document a very rapid rise in ANC.

Figure 4.2 **Trends in Antenatal Care from a Medically Skilled Provider, Various Surveys, Afghanistan 2003-2010**



Note: AMS 2010 based on last live birth in five-year period prior to the survey; NRVA 2007/8 and MICS 2003 based on last live birth in the two years prior to the survey; AHS based on last live birth to currently married women in the two years prior to the survey.

AMS 2010

4.1.2 Reasons for Not Seeking Antenatal Care

Table 4.2 shows the percentage of women age 12-49 who had a live birth in the five years preceding the survey but who did not see anyone for ANC for the most recent birth, reporting various reasons for not seeking ANC, according to background characteristics. The leading reason for not seeking ANC is lack of money (50 percent) followed closely by distance to a facility and transportation problems (49 percent and 48 percent, respectively). A sizeable number of women also felt that there was no need for the services (41 percent) or that it was not customary (22 percent). Some of the other more common reasons were security problems (13 percent), unavailability of female healthcare providers (13 percent), and lack of good service (11 percent).

More than half of women in rural areas cited transportation problems, distance to service, and lack of money as leading reasons for not seeking care. These three problems were also the leading reasons cited by women residing in all 3 zones to not seek ANC. More than one in four women in the South zone cited security reasons for not seeking ANC. Two-thirds of women living in the Central Highland region believe that it is not necessary to seek ANC during pregnancy. Surprisingly, with the exception of women with no education, the proportion of women who state that it is not necessary to seek ANC increases with education as well as with wealth. The proportion of women citing transportation problems, distance to antenatal services, and lack of money as major problems decreases as household wealth increases. Not surprisingly, women in the most remote areas report accessibility as the major constraint on seeking ANC.

Table 4.2 Reasons for not seeking antenatal care

Percentage of women 12-49 who had a live birth in the five years preceding the survey but who did not see anyone for antenatal care for the most recent birth, by reason for not seeking antenatal care, according to background characteristics, Afghanistan 2010

Background characteristic	Not necessary	Not custom-ary	Lack of money	Too far	Trans-portation problem	No one to accom-pany	Good service not available	Did not get permis--sion	Better service at home	Did not know where to go	No female provider available	Incon-venient service hour	Afraid of bad people	Security reasons	Long waiting time	Religious reasons	Afraid of health facilities	Was not life threaten-ing	Other	Number of women
Mother's age at birth																				
<20	43.1	16.6	42.0	47.0	45.8	13.2	9.6	7.9	3.9	1.6	11.0	4.4	3.4	10.1	4.2	3.0	0.5	2.3	4.7	841
20-34	40.6	22.3	50.8	49.7	48.3	10.4	11.4	6.6	4.6	2.9	13.5	4.6	3.2	13.3	4.9	2.7	1.3	3.8	3.4	4,347
35-49	38.5	23.5	54.8	50.0	49.2	10.4	12.3	6.7	3.5	1.8	13.2	8.7	4.0	14.4	5.1	2.2	0.9	5.0	2.2	1,117
Birth order																				
1	44.1	23.6	41.3	46.7	46.1	9.6	10.3	7.4	5.0	2.0	11.6	4.9	3.0	10.4	3.4	2.8	1.1	3.4	3.6	776
2-3	43.0	20.7	48.1	49.2	46.0	11.6	10.5	6.6	4.2	2.7	12.5	4.7	3.9	13.6	6.0	2.4	1.0	3.7	4.4	1,787
4-5	38.4	19.5	52.2	49.0	49.2	10.8	11.6	7.3	5.1	3.4	13.7	4.2	2.9	11.7	4.0	3.0	1.3	3.8	3.0	1,560
6+	38.9	23.5	54.1	50.8	49.9	10.4	12.0	6.4	3.6	2.1	13.7	6.7	3.4	14.6	5.1	2.5	1.2	4.0	2.6	2,181
Residence																				
Urban	53.5	11.0	27.2	13.3	11.1	3.5	5.2	5.8	2.3	2.7	4.1	3.0	0.2	1.6	2.3	1.5	1.2	11.9	6.8	448
Rural	39.6	22.6	52.1	52.1	51.0	11.3	11.7	6.9	4.4	2.5	13.8	5.5	3.6	14.0	5.1	2.7	1.2	3.2	3.1	5,857
Zone																				
North	35.0	13.2	60.1	57.6	53.6	11.8	11.6	6.3	9.6	1.4	4.4	0.9	0.8	2.8	3.3	0.8	0.7	0.3	2.9	1,764
Central	45.5	15.0	45.4	43.0	39.3	8.2	11.3	5.7	1.2	1.6	15.0	1.9	0.7	4.3	1.1	0.9	1.4	2.1	4.2	1,951
South	40.6	32.7	47.5	48.6	51.1	12.0	11.1	8.0	3.0	4.1	17.6	10.8	7.1	26.7	8.7	5.2	1.3	7.4	3.0	2,590
Region																				
North Eastern	26.8	12.2	75.0	73.4	73.3	16.0	17.6	9.7	15.7	1.9	5.5	0.5	0.7	2.1	4.3	1.0	0.4	0.2	1.7	1,063
Northern	47.5	14.8	37.3	33.7	23.8	5.3	2.4	1.1	0.3	0.6	2.7	1.6	1.0	3.8	1.7	0.5	1.2	0.5	4.7	701
Western	43.0	10.6	49.4	47.7	45.0	6.4	15.1	3.2	0.4	0.8	19.0	1.5	1.1	4.0	1.5	0.9	1.3	2.6	2.8	1,114
Central Highland	67.4	13.6	17.4	27.0	12.6	8.6	1.4	1.0	0.0	1.6	2.4	0.0	0.0	0.0	0.0	0.0	2.0	0.0	12.1	256
Capital	40.6	23.9	50.0	40.9	40.2	11.6	8.5	12.8	3.2	3.0	12.8	3.6	0.2	6.8	0.8	1.2	1.2	2.1	3.5	581
Eastern	38.7	27.5	61.6	51.7	55.0	15.6	17.0	8.4	3.0	6.8	19.8	14.0	10.3	33.4	12.7	5.2	1.3	2.0	0.6	1,403
Southern	31.5	47.0	40.9	41.9	42.7	12.1	5.7	13.1	1.9	1.6	3.1	9.0	7.9	16.3	7.9	14.4	1.9	21.3	4.8	393
South Eastern	48.6	34.8	25.6	46.4	48.2	5.4	3.3	4.6	3.7	0.5	21.0	6.1	1.0	20.0	2.2	0.7	1.1	10.1	6.3	793
Mother's education																				
No education	40.3	22.3	51.0	49.7	48.6	11.1	11.5	6.9	4.4	2.6	13.2	5.5	3.3	13.3	4.9	2.6	1.1	3.8	3.2	5,959
Madrassa	33.4	10.4	55.0	57.3	45.8	7.8	15.4	7.3	1.9	1.3	23.4	3.2	9.4	17.3	6.4	1.7	0.0	0.0	0.0	74
Primary	46.8	15.3	34.0	40.7	42.0	4.4	5.4	5.3	1.6	3.0	9.5	1.8	2.4	9.9	1.4	5.5	2.8	5.3	8.7	179
Secondary	58.5	7.9	30.6	32.6	32.2	4.5	8.8	2.4	0.5	0.0	4.1	0.0	2.6	3.9	2.7	1.9	0.5	2.8	4.6	75
Higher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	18
Wealth quintile																				
Lowest	30.5	13.7	62.7	64.1	58.7	11.9	16.0	5.4	6.2	2.0	13.9	1.4	1.1	3.3	2.1	1.0	1.5	0.3	4.2	1,811
Second	37.3	16.1	54.4	51.4	49.5	9.7	12.1	7.2	5.4	4.1	13.1	2.7	0.9	11.5	2.6	1.5	0.9	1.2	1.9	1,335
Middle	46.3	30.0	49.8	46.5	48.1	10.6	9.5	8.7	2.6	2.7	14.3	6.9	2.4	19.7	5.3	4.1	1.2	3.3	1.8	1,222
Fourth	46.7	31.9	44.2	42.4	43.1	13.6	8.5	7.2	3.0	2.4	14.8	11.7	9.7	22.4	10.9	4.7	1.0	6.7	2.7	1,271
Highest	52.5	20.5	21.3	23.8	26.5	4.7	5.6	5.8	2.6	1.2	5.6	6.0	4.1	13.2	4.6	2.9	1.1	13.6	7.8	666
Remoteness quintile																				
Most remote	36.5	16.8	57.5	58.8	56.2	12.6	10.8	6.0	3.3	2.3	13.0	4.8	2.5	8.8	3.8	2.5	1.3	1.1	4.7	1,873
Second	43.1	19.4	43.7	45.7	44.6	9.0	10.2	6.8	3.2	1.7	10.9	5.1	2.8	8.9	3.9	1.7	1.1	6.1	2.0	1,824
Middle	40.2	25.6	50.9	51.2	49.2	11.1	15.8	6.2	5.7	3.9	16.9	5.3	3.8	17.4	5.6	4.1	1.4	5.1	4.0	1,308
Fourth	42.3	30.8	51.9	44.0	47.2	11.5	10.8	9.6	7.2	2.9	15.9	7.7	6.2	25.4	7.9	3.0	1.0	2.5	1.7	956
Least remote	45.9	21.1	40.2	25.9	21.6	6.4	3.8	6.1	1.9	2.7	3.5	2.3	1.8	7.9	4.6	1.3	0.4	5.1	4.1	344
Total	40.6	21.7	50.3	49.4	48.2	10.8	11.3	6.8	4.3	2.6	13.1	5.3	3.4	13.1	4.9	2.6	1.2	3.8	3.3	6,304

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

4.1.3 Problems with Pregnancy at First Antenatal Visit

Table 4.3 shows that almost half of the mothers (49 percent) sought ANC during their first visit not because of a problem but because they wanted a checkup, an indication that women are aware that a checkup is necessary during pregnancy to ascertain that there are no problems. Women are more likely to go for a checkup not associated with a problem when it is for their first child, if they live in an urban area, or in the North zone, particularly in the North Eastern region. Seventy-nine percent of mothers with a high level of education go for a first visit just to get a checkup and not because of a problem. This percentage is higher than the percentages just going for a checkup among women with secondary (61 percent), primary (51 percent), madrassa (44 percent), and no education (48 percent). There is no clear relationship between wealth and remoteness and the likelihood that the woman's first visit for ANC was motivated simply by the desire to have a checkup rather than to obtain care for a specific problem.

The most commonly reported problems that led to seeking ANC for the first time are headache (20 percent), pain in the lower abdomen (17 percent), and body ache (15 percent).

Table 4.3 Problems with pregnancy at first antenatal visit

Percentage of women 12-49 who had a live birth in the five years preceding the survey who went for antenatal care for the most recent birth by type of problems they had when they first went for antenatal care, according to background characteristics, Afghanistan 2010

Background characteristic	No problem, just went for checkup	Head-ache	Blurry vision	Edema/ swollen face/ hands/ feet	High fever	Spotting/ bleeding	Foul-smelling discharge	Lower abdominal pain	Convul-sions/ shaking/ fits	Fainted/ uncon-scious	Too early contrac-tions	Baby not moving/ not moving much	Vomiting	Whole body pain	Anemia/ thin/ weak blood	Eclampsia/ pre-eclampsia	Number of women
Mother's age at birth																	
<20	50.2	18.2	8.1	7.7	4.5	6.0	2.4	15.6	1.2	2.9	4.6	1.3	13.1	14.0	7.5	0.9	1,494
20-34	50.2	19.3	10.7	10.3	6.0	5.6	3.0	17.2	1.4	2.8	4.2	1.7	11.8	14.9	7.7	0.5	7,587
35-49	43.9	22.3	12.6	12.0	7.3	8.4	3.3	19.5	2.0	2.5	5.4	1.4	10.5	17.4	7.8	0.8	1,613
Birth order																	
1	53.9	17.4	9.0	6.6	4.6	5.1	2.1	14.9	1.6	2.5	4.3	1.3	13.4	13.7	7.3	0.3	1,635
2-3	51.5	17.8	9.7	9.7	6.1	4.9	3.4	16.5	1.3	2.8	3.5	1.6	10.8	12.9	6.6	0.6	3,172
4-5	48.5	20.1	10.8	9.9	6.0	5.3	2.8	17.1	1.5	3.1	5.0	1.7	12.0	15.5	8.8	0.6	2,592
6+	45.3	22.0	12.3	12.8	6.7	8.2	3.1	19.4	1.5	2.5	5.1	1.6	11.7	17.6	8.0	0.7	3,295
Residence																	
Urban	51.3	16.9	8.7	10.4	6.0	4.9	3.3	18.2	0.9	2.9	4.5	1.2	12.0	14.2	7.1	0.4	2,797
Rural	48.5	20.6	11.3	10.2	6.0	6.5	2.9	17.0	1.7	2.7	4.4	1.7	11.7	15.5	7.9	0.7	7,896
Zone																	
North	56.1	16.8	3.3	8.9	3.6	5.1	1.3	16.3	0.8	2.2	3.8	0.7	9.9	11.1	4.0	0.1	3,582
Central	50.9	18.1	9.6	10.9	6.9	6.2	4.7	18.3	1.8	2.7	6.8	1.7	12.0	14.7	6.8	0.3	4,014
South	39.1	24.8	20.5	10.8	7.7	6.9	2.7	17.2	1.7	3.4	2.3	2.5	13.7	20.3	13.1	1.6	3,097
Region																	
North Eastern	66.8	17.4	6.1	8.5	3.3	5.0	1.0	15.6	1.0	2.6	3.2	0.6	10.0	9.8	3.2	0.2	1,549
Northern	48.0	16.4	1.2	9.3	3.9	5.2	1.6	16.9	0.7	2.0	4.2	0.7	9.9	12.1	4.7	0.0	2,033
Western	38.8	19.8	10.5	12.5	8.6	10.3	8.8	22.6	2.8	2.8	8.4	3.1	13.3	16.1	8.7	0.3	1,155
Central Highland	35.0	27.9	5.6	8.8	3.2	2.2	2.5	11.4	0.8	0.0	0.8	0.4	12.1	12.1	5.5	0.0	301
Capital	58.2	16.1	9.6	10.5	6.5	4.8	3.1	17.1	1.5	3.0	6.7	1.2	11.4	14.3	6.1	0.3	2,558
Eastern	38.8	20.8	17.7	10.4	4.7	7.2	2.6	19.0	2.0	3.4	2.6	2.1	14.8	20.5	13.4	2.4	1,641
Southern	51.3	20.3	15.8	10.4	6.9	6.3	3.5	12.4	1.3	3.4	3.5	1.1	9.3	12.4	11.3	1.6	704
South Eastern	28.5	37.8	30.9	12.0	14.9	6.9	1.9	17.8	1.5	3.4	0.4	4.5	15.3	27.4	14.0	0.0	752
Mother's education																	
No education	47.9	20.7	11.3	10.5	6.4	6.2	3.1	17.9	1.5	2.8	4.4	1.7	11.9	15.5	7.7	0.6	9,024
Madrassa	43.8	16.0	7.6	13.5	5.5	6.4	3.4	15.5	3.3	6.7	4.5	1.6	9.3	24.7	15.9	0.0	124
Primary	51.4	15.7	8.0	9.3	3.9	5.7	2.6	16.4	0.9	2.9	5.6	0.8	13.3	14.1	7.7	0.6	821
Secondary	61.0	12.0	7.2	7.4	3.4	4.8	2.6	12.7	0.9	1.9	4.2	0.5	10.3	11.1	6.0	0.8	578
Higher	79.2	4.8	2.4	4.4	2.8	3.1	0.9	4.8	0.0	1.0	2.0	0.0	4.1	6.6	4.1	0.7	146
Wealth quintile																	
Lowest	50.1	20.8	7.2	11.4	5.5	7.4	2.6	18.0	1.7	2.2	4.8	1.6	12.0	14.0	4.8	0.1	1,733
Second	50.2	16.7	5.5	9.5	5.4	5.6	2.8	18.3	1.1	2.1	4.8	1.3	9.2	12.3	6.4	0.6	2,174
Middle	49.0	21.7	13.4	9.5	5.4	6.6	2.7	16.8	1.9	3.3	5.0	1.5	12.3	16.2	8.7	0.8	2,051
Fourth	45.9	22.6	16.2	10.9	7.1	6.2	3.6	17.7	1.8	3.2	4.0	2.3	13.5	18.0	10.4	0.9	2,133
Highest	50.7	17.0	10.5	10.0	6.4	4.9	3.1	16.1	1.1	2.8	4.0	1.3	12.0	15.0	7.7	0.6	2,604
Remoteness quintile																	
Most remote	47.3	22.7	9.1	8.9	5.2	6.2	2.9	18.2	1.4	2.7	4.4	1.2	13.1	15.9	6.1	0.1	2,639
Second	51.9	18.8	9.8	10.1	6.4	5.7	3.0	14.9	1.0	2.9	3.4	1.6	9.7	14.0	7.0	0.3	2,913
Middle	48.5	18.6	11.7	12.0	7.1	6.9	2.8	19.0	2.2	3.0	5.5	1.8	13.0	15.9	8.9	1.3	2,002
Fourth	47.6	20.8	15.1	11.0	6.2	6.1	2.8	18.9	1.8	2.4	4.7	1.7	12.2	15.6	10.1	0.9	1,833
Least remote	50.6	14.8	7.8	9.3	5.0	5.1	3.7	16.0	0.9	2.7	4.9	1.7	11.3	14.3	7.2	0.8	1,306
Total	49.2	19.6	10.6	10.2	6.0	6.0	3.0	17.3	1.5	2.8	4.5	1.6	11.8	15.1	7.7	0.6	10,693

4.1.4 Number and Timing of Antenatal Visits

ANC is more beneficial in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and is continued through delivery. The WHO recommends that a woman without complications have at least four ANC visits to receive sufficient ANC to detect health problems associated with a pregnancy. In the event of any complications, more frequent visits are advised and admission to a health facility may be necessary.

Table 4.4 shows that one-sixth (16 percent) of pregnant women make four or more ANC visits during their entire pregnancy. Urban women (34 percent) are almost three times as likely as rural women (12 percent) to receive four or more antenatal visits.

Less than one in five women (18 percent) made their first ANC visit before the fourth month of pregnancy. The median duration of pregnancy at the first ANC visit is 5.5 months (5.2 months in urban areas and 5.6 months in rural areas).

Table 4.4 Number of antenatal care visits and timing of first visit

Percent distribution of women age 12-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Afghanistan 2010

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	13.8	42.6	37.1
1	13.5	13.9	13.8
2-3	38.3	30.7	32.2
4+	33.6	12.0	16.1
Don't know/missing	0.8	0.8	0.8
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	13.8	42.6	37.1
<4	30.0	15.4	18.2
4-5	21.2	16.8	17.7
6-7	21.9	16.6	17.6
8+	12.2	7.6	8.5
Don't know/missing	0.9	0.9	0.9
Total	100.0	100.0	100.0
Number of women	3,245	13,753	16,998
Median months pregnant at first visit (for those with ANC)	5.2	5.6	5.5
Number of women with ANC	2,797	7,896	10,693

4.1.5 Components of Antenatal Care

The content of ANC is important in assessing the quality of ANC services. Table 4.5 presents the percentages of women who took iron tablets or syrup and intestinal parasite drugs during their most recent pregnancy in the five years preceding the survey.[2] The table also shows among women who received ANC, the percentages of women who were informed about the signs of complications of pregnancy and the percentages who received specific antenatal services. Pregnancy complications are an important source of maternal and child morbidity and mortality. Thus teaching pregnant women about the danger signs associated with pregnancy and the appropriate action to take are essential components of ANC.

Among women with a live birth in the past five years, 38 percent took iron tablets or syrup and four percent took intestinal parasite drugs while pregnant with the last birth. There are substantial variations by background characteristics. Women less than age 35 at birth, women with five or fewer children, urban women, those residing in the South zone, those living in the Capital region, women with higher education, women in the higher wealth quintiles, and women in the least remote quintiles are much more likely to have taken iron tablets during pregnancy than their counterparts.

[2] Some caution must be exercised in considering the information in Table 4.5 since it depends on the woman's understanding of the questions, e.g., her understanding of what is involved in blood pressure measurement. It also depends on the mother's recall of events during visits to the provider that may have taken place a number of years before the interview. Nonetheless, the results are useful in providing insight into the content of the ANC women receive during pregnancy.

Table 4.5 Components of antenatal care

Among women age 12-49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Afghanistan 2010

	Among women with a live birth in the last five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the last five years, the percentage with selected services:					
Background characteristic	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the past five years	Informed of signs of pregnancy complica-tions	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Mother's age at birth									
<20	38.1	3.2	2,334	32.9	38.2	87.8	32.7	30.3	1,494
20-34	38.4	4.0	11,934	32.6	39.6	89.5	32.6	30.5	7,587
35-49	35.4	4.2	2,730	31.1	42.2	91.0	31.1	30.0	1,613
Birth order									
1	38.7	3.1	2,411	31.0	39.0	89.7	38.5	36.5	1,635
2-3	38.9	4.3	4,959	31.9	37.5	89.2	33.1	30.9	3,172
4-5	39.3	3.5	4,152	33.1	40.2	88.4	31.6	29.4	2,592
6+	35.6	4.2	5,475	33.2	42.0	90.5	29.2	27.7	3,295
Residence									
Urban	41.7	3.4	3,245	29.4	35.5	89.1	36.4	35.6	2,797
Rural	37.0	4.1	13,753	33.5	41.3	89.6	30.9	28.6	7,896
Zone									
North	32.0	3.8	5,346	25.9	39.5	92.7	20.4	15.4	3,582
Central	39.3	2.9	5,965	31.1	38.5	85.4	29.1	24.4	4,014
South	41.9	5.1	5,687	41.8	41.8	91.1	50.4	55.5	3,097
Region									
North Eastern	28.4	1.2	2,612	27.7	35.6	93.4	19.7	14.7	1,549
Northern	35.4	6.4	2,734	24.5	42.5	92.2	21.0	16.0	2,033
Western	29.8	2.8	2,269	35.1	33.5	78.7	24.3	22.4	1,155
Central Highland	38.5	3.5	557	4.8	61.9	94.8	1.9	4.3	301
Capital	46.4	2.9	3,139	32.4	37.9	87.2	34.6	27.7	2,558
Eastern	44.6	8.5	3,045	54.9	53.1	91.9	49.2	55.5	1,641
Southern	40.6	1.4	1,097	42.3	48.1	84.3	52.5	49.3	704
South Eastern	37.6	1.2	1,545	12.7	11.2	95.7	51.1	61.3	752
Mother's education									
No education	37.0	3.9	14,982	32.0	39.3	89.3	30.9	29.2	9,024
Madrassa	35.3	1.1	198	39.1	62.7	90.5	48.5	52.1	124
Primary	44.7	4.8	1,001	33.6	37.6	88.5	37.8	32.0	821
Secondary	45.3	4.3	653	36.3	43.5	91.1	41.3	39.1	578
Higher	55.0	6.1	164	32.5	46.6	95.9	45.1	44.0	146
Wealth quintile									
Lowest	24.9	3.5	3,543	24.1	40.9	88.7	18.8	14.5	1,733
Second	36.1	3.8	3,509	33.7	41.7	88.4	21.3	19.0	2,174
Middle	39.0	3.1	3,272	36.6	42.2	90.3	34.8	31.7	2,051
Fourth	46.4	4.7	3,403	32.9	39.7	90.7	40.9	40.7	2,133
Highest	43.9	4.8	3,270	33.3	35.6	89.3	41.7	41.2	2,604
Remoteness quintile									
Most remote	34.6	4.3	4,511	32.8	41.7	91.0	24.1	22.9	2,639
Second	38.8	3.4	4,737	30.9	35.6	89.6	26.5	25.5	2,913
Middle	37.0	3.8	3,310	34.7	42.4	87.0	37.3	33.1	2,002
Fourth	41.2	5.1	2,789	31.3	41.3	90.6	45.2	43.9	1,833
Least remote	40.5	2.8	1,651	33.3	39.1	88.3	36.6	33.6	1,306
Total	37.9	3.9	16,998	32.4	39.8	89.5	32.4	30.4	10,693

Because the percentage of women who took drugs for intestinal parasites during their most recent pregnancy in the five years preceding the survey is so low, hardly any variation can be observed in relation to the background characteristics of women. However, women residing in the Eastern and Northern regions and women with higher education are more likely than other women to take intestinal parasite drugs during their most recent pregnancy (6-9 percent).

About one-third (32 percent) of mothers who received ANC report that they had been informed about pregnancy complications during their antenatal visit. About two-fifths of pregnant women (40 percent) were weighed, 90 percent had their blood pressure taken, 32 percent had their urine sampled, and about one-third of women (30 percent) had their blood tested.

The content of ANC is clearly linked to a mother's education, wealth, residence, and birth order. For example, nearly half of women with higher education (47 percent) were weighed and the majority (96 percent) had their blood pressure measured, compared with 39 percent and 89 percent, respectively, among women with no education. Women in the highest wealth quintile and those in urban areas are more likely to have urine and blood tests than their counterparts. Less than one-quarter of women (24 percent) in the lowest wealth quintile received information about pregnancy complications, compared with one-third or more among the remaining women. Rural women (34 percent) are more likely than urban women (29 percent) to report that they were told about the signs of pregnancy complications during their ANC visits. The relationship between the quality of ANC and remoteness is less clear.

The overall quality of ANC services for rural women has improved markedly in the past five years as is evident when the AMS findings are compared with the results of the AHS 2006 (JHUBSPH and IIHMR, 2008).[3] The percentage of rural women informed of pregnancy complications increased from 14 percent to 34 percent over the last five years, while the percentages of rural women who were weighed or had their blood pressure measured increased from 16 percent to 41 percent and from 23 percent to 90 percent, respectively, over the same period. Similarly, there are substantial differences between the AHS 2006 and the AMS 2010 in the percentage of rural pregnant women whose blood (14 percent versus 29 percent) or urine samples (13 percent versus 31 percent) were taken.

4.1.6 Tetanus Toxoid Vaccine

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, a major cause of death among infants. For full protection, a pregnant woman should receive at least two doses during each pregnancy. If a woman has been vaccinated during a previous pregnancy or during maternal and neonatal tetanus vaccination campaigns, however, she may only require one dose for the current pregnancy. Five doses are considered to provide lifetime protection.

Table 4.6 presents the percentage of women age 12-49 with a live birth in the five years preceding the survey whose last birth was protected against neonatal tetanus. Births to three out of five mothers (60 percent) in the five years preceding the survey were protected against neonatal tetanus. Half of pregnant women (50 percent) received two or more tetanus injections during their last pregnancy.

Mothers age less than 20 years and mothers of births of order 5 or less were slightly more likely to have received two or more tetanus injections during their last pregnancy than older mothers age 35-49 and mothers of birth order 6 and higher. Though there is hardly any variation in relation to urban and rural areas, there are marked differences in tetanus coverage by zones. Sixty percent of women in the North zone received two or more tetanus toxoid injections, compared with women in the Central zone where the uptake was much lower (44 percent). Women in the South Eastern region are least likely to receive the recommended dose of tetanus toxoid during their pregnancy (29 percent) and also least likely to have their most recent birth protected against neonatal tetanus. Education and wealth have a positive effect on whether a neonate is protected against tetanus. For example, 70 percent of mothers with higher education had their child protected against neonatal tetanus, compared with 57 percent of mothers with no education. Similarly, 64 percent of mothers in the highest wealth quintile had their child protected against neonatal tetanus, compared with 53 percent of mothers in the lowest quintile. A similar relationship is seen between tetanus coverage and remoteness. Women in the fourth and least remote quintiles are most likely to have their last birth protected against neonatal tetanus.

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[3] Similar information was not collected in the NRVA 2007/8.

Table 4.6 Tetanus toxoid injections

Among mothers age 12-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections (TTI) during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Afghanistan 2010

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	52.3	59.5	2,334
20-34	50.6	59.3	11,934
35-49	47.5	55.0	2,730
Birth order			
1	52.9	59.2	2,411
2-3	51.0	60.3	4,959
4-5	52.9	61.0	4,152
6+	46.7	55.1	5,475
Residence			
Urban	51.0	65.1	3,245
Rural	50.2	57.1	13,753
Zone			
North	60.3	66.3	5,346
Central	44.3	56.5	5,965
South	47.4	53.7	5,687
Region			
North Eastern	60.4	65.9	2,612
Northern	60.1	66.6	2,734
Western	33.4	44.0	2,269
Central Highland	46.5	59.7	557
Capital	51.8	65.0	3,139
Eastern	57.9	66.0	3,045
Southern	43.9	51.9	1,097
South Eastern	29.3	30.7	1,545
Mother's education			
No education	50.1	57.2	14,982
Madrassa	47.6	55.8	198
Primary	51.5	68.2	1,001
Secondary	56.8	74.1	653
Higher	50.5	70.0	164
Wealth quintile			
Lowest	47.6	52.6	3,543
Second	51.2	58.2	3,509
Middle	50.4	59.0	3,272
Fourth	51.7	59.4	3,403
Highest	51.1	64.4	3,270
Remoteness quintile			
Most remote	49.0	57.3	4,511
Second	49.5	56.5	4,737
Middle	48.5	56.3	3,310
Fourth	55.2	63.8	2,789
Least remote	52.2	64.4	1,651
Total	50.4	58.6	16,998

[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth

As with other maternal health indicators, tetanus toxoid coverage appears to have risen rapidly. The AHS 2006 found that 24 percent of women in rural Afghanistan had received at least 2 doses of tetanus toxoid (JHUBSPH and IIHMR, 2008). This compares to a rate of 50 percent among the rural women interviewed in the AMS.[4]

4.2 DELIVERY CARE

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may cause the death or serious illness of the mother, the baby, or both. Hence, an important component in the effort to reduce the health risks of mothers and children is to increase the proportion of babies delivered in a safe, clean environment and under the supervision of health professionals. Afghanistan is promoting safe motherhood through various activities, especially delivery by skilled birth attendants (SBA). Data on delivery care were collected for all births that occurred in the five years preceding the survey.

4.2.1 Delivery in a Health Facility

Table 4.7 presents the percent distribution of women's most recent live births in the five years preceding the survey by place of delivery, according to background characteristics. Nearly one in three births (32 percent) takes place in a health facility: 27 percent are delivered in a public sector health facility, and 5 percent are delivered in a private facility. With regard to facility deliveries, the overwhelming majority of deliveries occurring in public facilities took place in hospitals or CHCs (data not shown in table).

More than two out of three births (67 percent) take place at home. Delivery in a health facility is more common among mothers whose age at birth is less than 20 years (35 percent), mothers of first-order births (44 percent), and mothers who have had at least four antenatal visits (62 percent). Two out of three children (66 percent) in urban areas are born in a health facility, compared with 25 percent in rural areas. Delivery in a health facility also varies by zones, being lowest in the North zone (24 percent), highest in the Central zone (39 percent), and moderate (34 percent) in the South zone. Delivery in a health facility is most common in the Capital region (56 percent).

There is a strong association between health facility delivery, mother's education, wealth and remoteness quintiles. The proportion of deliveries in a health facility is only 28 percent among births to uneducated mothers, compared with 76 percent among births to mothers with higher education. A similar pattern is seen in terms of wealth quintiles: delivery at a health facility is significantly less common among births to mothers in the lowest wealth quintile (11 percent) compared with 63 percent of births to mothers in the highest quintile. Similary, 21 percent of births in the most remote households are delivered in a facility compared with 57 percent of births in the least remote households.

[4] Some caution should be used in interpreting these results since information on TT coverage was obtained differently in the AHS 2006 and in the AMS 2010. In the AHS 2006, information on TT coverage was obtained from all women who had a birth in the two years before the survey who had a TT card to show, but for those who did not have a card, recall questions were only asked of women who had received ANC from an SBA. TT coverage did not include women who received TT during campaigns. This could have resulted in an underestimate of true coverage (JHUBSPH and IIHMR, 2008). In the AMS 2010, TT coverage was obtained from recall for the most recent live birth in the five years before the survey. In addition, these women were also asked about TT received at any time before the pregnancy, the number of times TT was received and the month and year the last TT was received.

Table 4.7 Place of delivery

Percent distribution of women age 12-49 with a live birth in the five years preceding the survey by place of delivery of their most recent birth and percentage of most recent births delivered in a health facility, according to background characteristics, Afghanistan 2010

Background characteristic	Health facility: Public sector	Health facility: Private sector	Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
Mother's age at birth								
<20	29.8	5.3	64.7	0.1	0.1	100.0	35.1	2,334
20-34	27.6	5.2	66.9	0.1	0.2	100.0	32.8	11,934
35-49	23.5	4.7	71.1	0.2	0.5	100.0	28.2	2,730
Birth order								
1	36.1	7.5	56.1	0.2	0.2	100.0	43.6	2,411
2-3	28.2	5.1	66.5	0.1	0.1	100.0	33.3	4,959
4-5	25.2	4.8	69.5	0.1	0.4	100.0	30.1	4,152
6+	24.1	4.3	71.1	0.2	0.3	100.0	28.4	5,475
Number of ANC visits								
None	8.5	2.0	89.3	0.1	0.1	100.0	10.5	6,304
1	26.4	5.4	68.0	0.1	0.1	100.0	31.8	2,347
2-3	37.8	5.6	56.4	0.1	0.1	100.0	43.4	5,466
4+	50.2	11.4	38.2	0.2	0.1	100.0	61.6	2,745
Don't know/missing	26.6	2.7	53.0	0.3	17.4	100.0	29.3	135
Residence								
Urban	51.6	14.0	33.8	0.2	0.5	100.0	65.6	3,245
Rural	21.5	3.0	75.1	0.1	0.2	100.0	24.6	13,753
Zone								
North	20.4	3.8	75.6	0.1	0.1	100.0	24.2	5,346
Central	32.6	5.9	61.2	0.1	0.2	100.0	38.5	5,965
South	28.1	5.6	65.7	0.2	0.4	100.0	33.7	5,687
Region								
North Eastern	19.2	2.3	78.2	0.1	0.1	100.0	21.6	2,612
Northern	21.6	5.2	73.0	0.1	0.1	100.0	26.8	2,734
Western	20.2	1.4	78.2	0.1	0.1	100.0	21.6	2,269
Central Highland	10.3	0.0	89.7	0.0	0.0	100.0	10.3	557
Capital	45.5	10.2	43.9	0.1	0.3	100.0	55.8	3,139
Eastern	32.4	3.7	63.4	0.2	0.3	100.0	36.1	3,045
Southern	34.1	6.3	58.2	0.1	1.4	100.0	40.4	1,097
South Eastern	15.4	8.8	75.6	0.2	0.1	100.0	24.1	1,545
Mother's education								
No education	24.1	4.3	71.2	0.1	0.2	100.0	28.4	14,982
Madrassa	36.6	4.0	58.4	0.7	0.3	100.0	40.6	198
Primary	46.6	9.5	43.5	0.1	0.2	100.0	56.1	1,001
Secondary	58.9	14.8	25.6	0.3	0.4	100.0	73.7	653
Higher	62.5	13.8	23.5	0.2	0.0	100.0	76.2	164
Wealth quintile								
Lowest	10.0	0.8	89.1	0.1	0.1	100.0	10.8	3,543
Second	18.9	1.4	79.4	0.1	0.2	100.0	20.3	3,509
Middle	27.9	3.5	68.2	0.1	0.2	100.0	31.5	3,272
Fourth	33.4	5.2	60.9	0.1	0.3	100.0	38.7	3,403
Highest	47.9	15.3	36.1	0.3	0.4	100.0	63.3	3,270
Remoteness quintile								
Most remote	17.9	2.7	79.0	0.1	0.2	100.0	20.6	4,511
Second	21.5	4.1	74.1	0.1	0.2	100.0	25.6	4,737
Middle	30.0	6.5	63.0	0.1	0.4	100.0	36.6	3,310
Fourth	37.5	6.4	55.9	0.1	0.1	100.0	43.8	2,789
Least remote	46.7	9.9	42.9	0.2	0.4	100.0	56.6	1,651
Total	27.3	5.1	67.2	0.1	0.2	100.0	32.4	16,998

4.2.2 Reasons for Not Delivering in a Facility

To better understand why women do not deliver in a health facility, the AMS 2010 asked women who had a birth in the five years before the survey for the reasons they did not give birth in a health facility. Responses in Table 4.8 show that more than one-third of the women (35 percent) believed that it was not necessary to give birth in a health facility, and 19 percent mentioned that it was not customary. About half of the women said that it was due to a lack of money, distance to the health facility, or transportation problems that made them opt for delivery at home. Fourteen percent of women had no one to accompany them, while 13 percent of women reported that they did not go to the health facility to deliver the baby because there were no female providers available. Twelve percent of deliveries did not take place in a health facility due to security reasons.

Table 4.8 Reasons for not delivering at a health facility

Percentage of women 12-49 who had a live birth in the five years preceding the survey but did not deliver the most recent birth in a health facility, by reasons for not delivering in a health facility, according to background characteristics, Afghanistan 2010

Background characteristic	Not necessary	Not customary	Lack of money	Too far	Transportation problem	No one to accompany	Good service not available	Did not get permission	Better service at home	Did not know where to go	No female provider available	Inconvenient service hour	Afraid of bad people	Security reasons	Long waiting time	Religious reasons	Afraid of health facilities	Was not life threatening	Other	Number of women
Mother's age at birth																				
<20	35.3	15.7	48.3	53.3	51.4	13.9	8.8	6.7	4.3	1.2	11.2	7.0	2.8	10.4	4.3	2.6	2.4	2.4	4.9	1,516
20-34	35.4	19.9	51.2	51.8	51.0	13.5	9.1	6.9	5.2	2.4	13.4	6.5	2.3	12.0	4.4	2.4	1.6	2.6	3.6	8,015
35-49	34.7	18.8	52.8	51.0	51.5	13.4	10.2	7.4	3.9	1.8	13.4	7.8	2.7	13.1	5.7	2.0	2.0	2.9	3.3	1,960
Birth order																				
1	35.1	19.3	46.7	54.8	51.7	12.1	9.0	6.8	5.9	1.2	14.2	7.2	3.1	13.0	5.0	2.8	1.8	2.6	4.0	1,361
2-3	36.0	17.5	49.0	51.4	51.0	13.3	9.1	6.0	5.1	2.3	12.7	6.7	2.6	11.6	4.6	2.4	1.8	2.6	3.8	3,307
4-5	35.0	18.1	51.7	50.1	50.2	13.0	8.9	7.3	5.2	2.2	13.2	5.9	2.0	10.7	3.8	2.4	2.0	2.4	3.6	2,903
6+	34.9	21.3	54.0	52.5	51.8	14.8	9.8	7.4	4.1	2.2	13.1	7.5	2.3	12.8	5.1	2.1	1.7	2.7	3.6	3,920
Residence																				
Urban	45.7	10.2	24.8	20.3	23.7	12.2	9.8	3.9	5.9	2.2	6.1	5.3	0.5	5.9	3.5	1.4	4.1	3.2	4.9	1,116
Rural	34.1	20.1	53.9	55.3	54.1	13.7	9.2	7.2	4.8	2.1	13.9	7.0	2.6	12.6	4.7	2.4	1.6	2.5	3.6	10,375
Zone																				
North	31.4	13.7	59.2	55.5	53.0	13.5	8.7	6.2	7.8	1.1	5.3	1.0	0.8	3.3	4.6	1.8	2.2	0.8	2.9	4,051
Central	36.4	16.6	45.3	48.4	46.1	13.3	6.4	7.3	2.8	2.2	14.4	5.6	1.4	6.1	1.3	1.3	2.1	2.5	6.9	3,668
South	38.2	27.5	47.9	51.3	54.0	13.9	12.6	7.3	3.7	3.2	20.3	14.4	5.1	26.9	7.7	4.0	1.1	4.6	1.5	3,772
Region																				
North Eastern	26.3	13.9	75.2	73.0	74.3	17.6	15.1	9.9	14.4	1.7	4.7	0.2	0.7	2.4	6.6	2.1	2.5	0.1	2.0	2,049
Northern	36.6	13.6	42.9	37.7	31.2	9.3	2.1	2.4	1.1	0.5	5.9	1.7	0.9	4.3	2.6	1.5	1.9	1.7	3.8	2,002
Western	34.2	15.1	46.7	48.1	50.1	7.9	4.9	5.7	1.6	1.7	17.9	3.2	2.2	7.3	2.2	1.4	3.5	2.0	6.7	1,780
Central Highland	46.3	14.5	22.4	40.7	14.0	8.7	2.2	1.0	0.5	2.1	3.9	2.2	0.0	1.5	0.0	1.5	0.6	0.0	18.2	500
Capital	35.7	19.2	51.9	51.4	52.6	21.9	10.0	11.7	5.2	2.8	13.6	9.7	0.9	6.1	0.8	1.0	0.7	3.9	3.1	1,389
Eastern	39.4	28.1	62.5	53.5	56.0	17.3	16.6	8.5	3.0	5.9	18.3	17.8	7.5	30.6	10.3	4.1	1.7	1.5	1.1	1,946
Southern	31.3	32.2	37.8	36.0	41.5	12.5	10.3	10.8	2.1	0.3	7.2	13.1	6.3	22.5	8.1	10.8	0.5	10.1	2.2	654
South Eastern	40.1	23.9	29.3	56.2	57.5	9.1	7.3	3.3	5.9	0.2	31.0	9.3	0.6	23.2	3.2	0.2	0.4	6.8	1.9	1,172
Mother's education																				
No education	34.8	19.8	52.1	52.7	52.1	13.8	9.3	7.1	4.9	2.1	13.4	6.9	2.5	12.3	4.7	2.2	1.7	2.6	3.5	10,723
Madrassa	26.1	12.3	54.2	54.8	47.7	13.0	6.4	7.6	1.2	0.0	16.9	5.4	4.5	11.3	6.1	5.6	1.2	3.9	7.1	117
Primary	44.1	10.6	33.7	37.5	33.8	10.3	8.5	5.1	4.6	3.8	8.2	4.3	0.5	7.5	0.8	4.3	3.7	2.9	6.9	439
Secondary	45.3	7.4	35.2	33.6	39.0	8.6	10.1	2.0	4.9	2.0	5.3	9.1	1.9	5.3	4.9	4.0	1.7	1.9	5.4	172
Higher	(35.7)	(2.6)	(40.1)	(50.0)	(53.1)	(13.3)	(3.8)	(4.4)	(15.8)	(3.5)	(3.6)	(3.2)	(3.5)	(5.2)	(5.2)	(3.0)	(0.0)	(0.0)	(4.1)	39
Wealth quintile																				
Lowest	24.9	15.3	64.7	66.9	61.6	13.4	9.5	6.3	5.8	1.9	13.5	1.7	1.1	4.1	2.4	1.5	1.5	0.7	5.7	3,162
Second	31.7	17.2	54.9	54.5	53.0	13.8	9.2	8.0	6.1	2.9	13.0	4.1	1.3	9.0	3.5	2.6	1.7	1.8	2.8	2,798
Middle	39.6	23.1	50.7	51.7	53.0	14.8	8.3	8.1	3.0	2.4	14.2	9.9	2.5	19.0	5.2	2.5	1.7	2.5	2.5	2,243
Fourth	43.1	24.4	42.4	42.4	44.6	15.4	10.6	6.2	3.4	1.5	15.1	13.2	6.1	19.4	9.1	3.2	2.3	4.2	2.6	2,088
Highest	49.2	17.4	22.3	22.9	26.8	8.1	8.3	5.1	5.7	1.5	7.1	9.8	2.0	13.2	3.7	2.5	2.2	6.8	4.9	1,201
Remoteness quintile																				
Most remote	31.9	18.5	59.9	62.3	58.5	15.0	7.4	6.5	3.5	1.6	12.1	5.2	1.8	9.0	3.8	2.1	1.9	1.4	6.0	3,582
Second	36.0	17.1	47.8	49.9	50.1	12.5	8.5	7.0	3.9	1.5	12.4	7.3	2.0	8.0	3.7	1.6	1.1	3.6	2.3	3,525
Middle	36.6	22.1	48.5	50.0	51.3	14.4	11.8	6.9	6.8	3.3	15.6	7.4	3.1	16.4	5.1	3.7	2.0	3.4	3.5	2,100
Fourth	37.8	23.3	49.2	45.7	46.8	13.6	13.1	8.2	7.9	3.2	18.3	8.9	4.2	22.9	7.3	2.8	2.3	2.2	1.6	1,566
Least remote	38.3	15.0	35.3	28.7	27.9	9.8	6.3	5.9	4.4	2.0	2.9	6.8	1.8	9.0	5.2	2.3	2.7	2.2	4.6	717
Total	35.2	19.2	51.1	51.9	51.1	13.6	9.3	6.9	4.9	2.1	13.1	6.8	2.4	11.9	4.6	2.3	1.8	2.6	3.7	11,491

Note : Figures in parentheses are based on 25-49 unweighted cases.

4.2.3 Assistance at Delivery

Obstetric care from a trained provider during delivery is recognized as critical for the reduction of maternal and neonatal mortality. Table 4.9 shows the type of assistance during delivery by selected background characteristics. Around one-third (34 percent) of births are delivered with the assistance of an SBA (doctor or nurse/midwife). Doctors assist in the delivery of 16 percent of births, and nurse/midwives assist in 19 percent of deliveries. Other health workers assist in less than 1 percent of deliveries, while traditional birth attendants assist in 23 percent of deliveries. Women receive assistance from a relative or some other person for nearly two in five births (40 percent), while 2 percent of births take place without any type of assistance at all.

SBAs are more likely to attend births to mothers younger than age 20 and first order births (37 percent and 45 percent, respectively). Not surprisingly, nearly all births delivered in a health facility are attended by an SBA as opposed to births delivered elsewhere.

Seventy-one percent of urban births are assisted by an SBA, compared with 26 percent of births in rural areas. Births in the Central zone are more likely to be attended by an SBA than births in the North and South zones. Skilled birth attendance ranges from a low of 12 percent of births in the Central Highland region to a high of 58 percent in the Capital region.

There is a strong relationship between a mother's education and delivery by an SBA. The number of births delivered by an SBA increases with the level of a mother's education. Births to highly educated mothers are more than two and a half times (80 percent) as likely as births to uneducated mothers (30 percent) to receive assistance from an SBA. Similarly, assistance during delivery by an SBA varies by women's economic status: births to women in the highest wealth quintile are much more likely to be assisted by an SBA (68 percent) than births to women in the lowest wealth quintile (12 percent). Births in the least remote households (60 percent) are nearly three times as likely to be delivered by an SBA as births in the most remote households (22 percent).

As noted earlier in the chapter, the capacity of Afghan health facilities to provide delivery care to women has been expanding rapidly; around seven in ten health facilities had the capacity to provide delivery care according to BPHS standards in 2008, almost three times the proportion that met this standard in 2004 (JHUBSPH and IIHMR, 2009). An examination of AMS 2010 results indicates that there has been a similar steady increase in the proportion of women who are using delivery care services. Medically-assisted deliveries rose rapidly during the five-year period, from 26 percent during the period 36-59 months prior to the AMS to 42 percent in the 12 months immediately prior to the survey (Figure 4.3). The absolute increases in the delivery care rates were roughly similar in urban and rural areas (12 percentage points).

A comparison of the AMS 2010 results with the findings from several earlier surveys also documents the substantial progress Afghanistan has made in improving access to delivery care from SBAs (Figure 4.4).[5] At the time of the MICS 2003, 14 percent of births were attended by skilled providers (CSO and UNICEF, 2004). The NRVA 2007/8 found roughly one in four women (including Kuchi women) delivered with an SBA (ICON-INSTITUTE, 2009). In the AMS 2010, more than one-third of births were assisted by SBAs.

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[5] Some caution should be exercised in comparing the figures presented in Figure 4.4 since the surveys vary with respect to sample coverage, the manner in which questions were asked, the reference period for which the results apply and other factors. In particular, the trend in rural areas may be somewhat overstated in the AMS 2010 results as 16 percent of the rural population, largely in the South zone, could not be interviewed due to security concerns. These women likely have more limited access to services than the rural women who could be interviewed. However, the picture is clearly one of substantial increases in reliance on SBAs to assist deliveries.

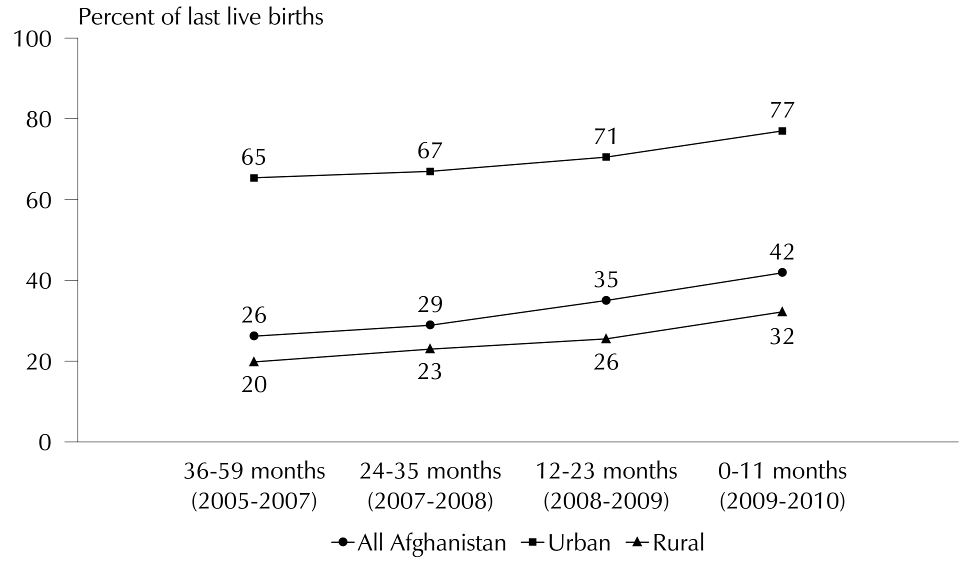
Table 4.9 Assistance during delivery

Percent distribution of women age 12-49 who had a live birth in the five years preceding the survey by person providing assistance during delivery of the most recent birth, and percentage of births assisted by a skilled provider, according to background characteristics, Afghanistan 2010

Background characteristic	Person providing assistance during delivery: Doctor	Nurse/ midwife	Other health worker	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total	Percentage delivered by a skilled provider[1]	Number of births
Mother's age at birth										
<20	16.4	20.2	0.7	27.4	33.2	1.7	0.3	100.0	36.6	2,334
20-34	15.8	19.0	0.5	21.9	39.9	2.2	0.6	100.0	34.8	11,934
35-49	13.7	16.9	0.5	21.2	43.9	3.0	0.8	100.0	30.6	2,730
Birth order										
1	21.8	23.2	0.6	22.2	29.6	2.1	0.6	100.0	45.0	2,411
2-3	15.6	19.7	0.6	23.1	38.4	2.2	0.5	100.0	35.3	4,959
4-5	15.3	16.8	0.7	22.5	42.1	1.9	0.6	100.0	32.1	4,152
6+	13.0	17.6	0.4	22.3	43.2	2.8	0.7	100.0	30.6	5,475
Place of delivery										
Health facility	46.6	52.1	0.2	0.2	0.5	0.0	0.5	100.0	98.7	5,507
Elsewhere	0.6	2.8	0.7	33.4	58.6	3.4	0.4	100.0	3.5	11,450
Missing	(10.2)	(6.5)	(0.0)	(1.7)	(8.6)	(3.3)	(69.7)	100.0	(16.8)	41
Residence										
Urban	38.7	32.2	0.7	9.3	17.6	0.7	0.9	100.0	70.9	3,245
Rural	10.1	15.6	0.5	25.7	44.8	2.7	0.5	100.0	25.7	13,753
Zone										
North	7.6	19.3	0.6	24.1	47.0	0.8	0.6	100.0	27.0	5,346
Central	20.3	19.9	0.4	28.2	28.3	2.2	0.6	100.0	40.3	5,965
South	18.0	17.1	0.6	15.2	44.6	3.8	0.7	100.0	35.1	5,687
Region										
North Eastern	5.1	18.3	0.3	21.5	53.8	0.4	0.6	100.0	23.4	2,612
Northern	10.1	20.3	0.8	26.5	40.5	1.2	0.5	100.0	30.4	2,734
Western	7.9	15.4	0.8	53.5	18.5	3.5	0.2	100.0	23.3	2,269
Central Highland	1.5	10.0	0.0	57.4	28.0	2.2	0.9	100.0	11.5	557
Capital	32.6	25.0	0.2	4.8	35.4	1.2	0.8	100.0	57.6	3,139
Eastern	21.0	16.0	0.4	3.9	56.6	1.9	0.2	100.0	37.0	3,045
Southern	12.5	30.3	1.7	20.6	23.7	9.5	1.8	100.0	42.8	1,097
South Eastern	15.9	9.8	0.3	33.8	35.7	3.5	0.9	100.0	25.7	1,545
Mother's education										
No education	12.8	17.3	0.6	24.0	42.2	2.5	0.6	100.0	30.1	14,982
Madrassa	28.7	12.9	0.8	22.0	33.1	2.4	0.0	100.0	41.6	198
Primary	30.8	30.1	0.2	14.0	23.1	0.9	0.8	100.0	60.9	1,001
Secondary	43.3	34.4	0.0	6.8	13.4	1.2	0.9	100.0	77.7	653
Higher	50.4	29.7	0.7	3.5	13.7	0.0	2.1	100.0	80.0	164
Wealth quintile										
Lowest	3.3	8.4	0.8	38.8	46.0	2.4	0.4	100.0	11.7	3,543
Second	6.8	14.4	0.4	29.0	46.9	1.9	0.7	100.0	21.2	3,509
Middle	11.5	21.2	0.4	17.3	46.3	2.7	0.6	100.0	32.7	3,272
Fourth	19.5	21.2	0.4	15.6	39.8	2.9	0.6	100.0	40.7	3,403
Highest	38.1	29.9	0.7	10.8	18.2	1.6	0.7	100.0	68.0	3,270
Remoteness quintile										
Most remote	9.0	13.0	0.8	26.7	47.8	2.1	0.7	100.0	22.0	4,511
Second	12.2	14.9	0.4	27.8	42.3	1.9	0.4	100.0	27.1	4,737
Middle	15.4	23.4	0.7	24.5	31.1	4.0	0.8	100.0	38.9	3,310
Fourth	24.3	21.7	0.3	11.7	39.9	1.6	0.5	100.0	46.0	2,789
Least remote	28.7	31.6	0.5	11.0	26.2	1.6	0.5	100.0	60.2	1,651
Total	15.5	18.8	0.5	22.6	39.6	2.3	0.6	100.0	34.3	16,998
Total (excluding South zone)	14.3	19.7	0.5	26.3	37.2	1.5	0.6	100.0	34.0	11,311

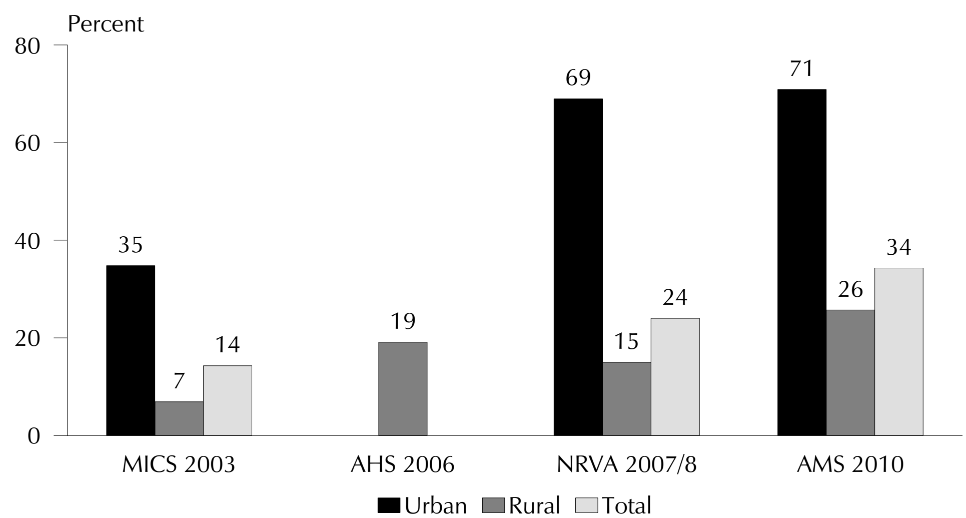
Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, midwife. Figures in parentheses are based on 25-49 unweighted cases.

Figure 4.3 Trends in Delivery Care from a Medically Skilled Provider by Urban-Rural Residence, Afghanistan 2010



AMS 2010

Figure 4.4 Trends in Delivery Care from a Medically Skilled Provider, Various Surveys, Afghanistan 2003-2010



Note: AMS 2010 based on last live birth in five-year period prior to the survey; NRVA 2007/8 and MICS 2003 based on last live birth in the two years prior to the survey; AHS 2006 based on last live births to currently married women in the two years prior to the survey.

AMS 2010

4.2.4 Procedures Performed at Delivery

Table 4.10 shows the various clinical procedures performed during delivery in health facilities. Five percent of births that are delivered in a health facility are delivered by caesarean section. The percentage of deliveries by caesarean section is highest among births to highly educated mothers (10 percent), births to mothers in the highest wealth quintile (6 percent), and first births (8 percent). Women received blood transfusions during delivery for less than 5 percent of facility births. The most common procedure performed in an institutional delivery is the use of intravenous fluids (63 percent). Women giving birth at less than 20 years of age and those having their first child are more likely to have an episiotomy conducted during delivery.

Table 4.10 Procedures performed at delivery

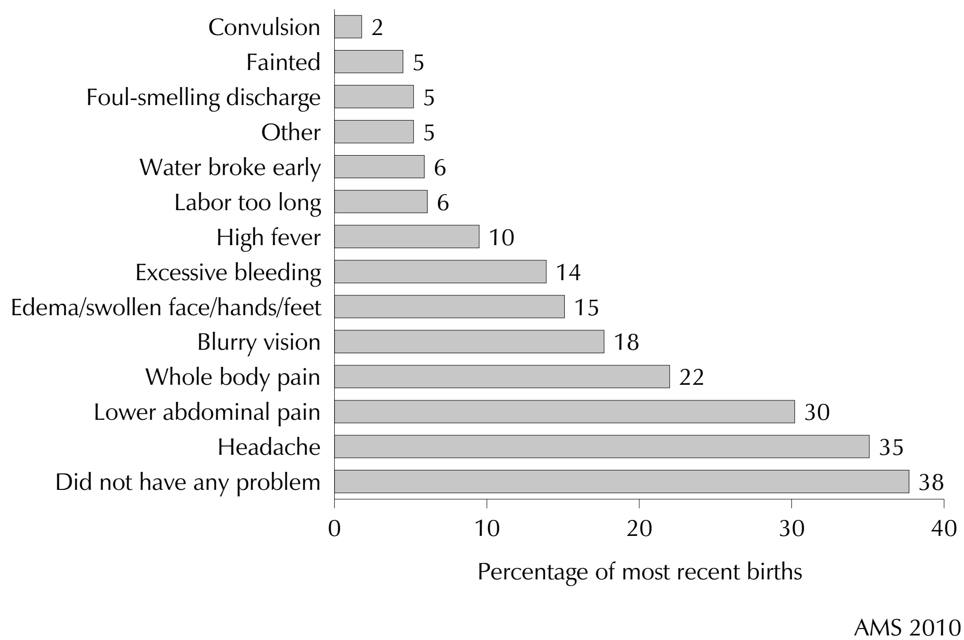
Percentage of women age 12-49 who had a live birth in the five years preceding the survey in a health facility by type of procedures performed during delivery of the most recent birth, according to background characteristics, Afghanistan 2010

Background characteristic	Procedures performed during delivery						Number of births delivered in a health facility
	Use of forceps	Use of vacuum extractor	Episiotomy	Caesarean section	Received blood transfusions	Received intravenous fluids	
Mother's age at birth							
<20	5.6	6.9	17.8	4.0	5.4	64.3	819
20-34	7.8	9.5	6.7	5.0	4.3	61.9	3,919
35-49	7.9	11.4	2.7	6.3	6.9	64.3	770
Birth order							
1	7.1	9.1	22.0	8.0	5.2	65.6	1,051
2-3	6.1	8.6	7.3	4.8	4.8	62.2	1,652
4-5	7.0	8.1	3.3	3.2	3.8	60.2	1,249
6+	9.6	11.4	2.2	4.8	5.3	62.9	1,555
Residence							
Urban	4.0	5.6	6.7	6.2	3.1	51.4	2,130
Rural	9.7	11.8	8.4	4.3	5.9	69.7	3,378
Zone							
North	4.2	4.0	3.7	4.5	4.9	55.0	1,295
Central	11.6	12.3	9.5	6.1	4.0	51.0	2,297
South	4.7	9.5	8.4	4.1	5.6	81.7	1,915
Region							
North Eastern	8.9	8.9	2.2	4.5	9.4	66.1	563
Northern	0.5	0.3	4.9	4.6	1.5	46.4	732
Western	2.9	7.4	15.2	6.1	4.3	69.1	489
Central Highland	0.0	0.0	0.0	0.0	5.6	28.0	57
Capital	14.5	14.1	8.2	6.3	3.9	46.7	1,750
Eastern	3.7	7.6	13.4	3.5	6.3	74.5	1,099
Southern	3.7	10.2	2.6	3.2	4.2	86.4	443
South Eastern	8.8	14.2	0.6	7.0	5.4	97.2	373
Mother's education							
No education	8.0	9.9	6.5	4.5	5.3	64.7	4,259
Madrassa	0.7	4.4	27.8	4.0	4.4	81.5	80
Primary	5.5	7.8	11.1	5.0	2.7	55.6	562
Secondary	7.2	8.5	11.1	8.8	3.1	50.9	481
Higher	2.5	4.6	10.2	9.9	2.8	54.8	125
Wealth quintile							
Lowest	3.8	3.8	6.3	4.5	8.1	60.1	382
Second	5.5	6.3	5.6	4.1	6.7	61.5	711
Middle	13.8	15.1	7.2	4.3	4.4	62.3	1,030
Fourth	7.7	11.1	10.6	5.2	5.1	69.1	1,316
Highest	5.6	7.5	7.3	5.8	3.6	59.5	2,069
Remoteness quintile							
Most remote	3.8	3.9	5.3	5.3	5.2	65.3	930
Second	3.2	6.8	8.1	3.6	3.6	68.0	1,212
Middle	14.5	16.6	6.8	4.6	6.2	63.4	1,210
Fourth	8.8	10.6	9.6	6.8	6.1	60.8	1,222
Least remote	5.8	7.2	8.7	5.0	2.4	54.3	934
Total	7.5	9.4	7.8	5.0	4.8	62.6	5,507

4.2.5 Problems Experienced around Delivery

Maternal morbidity affects fetal and neonatal health and can lead to maternal deaths. The AMS 2010 asked women if they faced any problems just before, during, or soon after delivery of their last live birth in the five years preceding the survey. Figure 4.5 shows the percentage of women age 12-49 by type of problems they faced when they gave birth to their last child. Nearly two in five women (38 percent) reported not facing any problems during their last delivery. Among the problems that were reported, the most prevalent are headache (35 percent), lower abdominal pain (30 percent), whole body pain (22 percent), blurry vision (18 percent), edema or swollen face/hands/feet (15 percent), excessive bleeding (14 percent), and high fever (10 percent). These are some of the important danger signs that require proper and timely attention.

Figure 4.5 **Problems Before, During, or After Delivery**

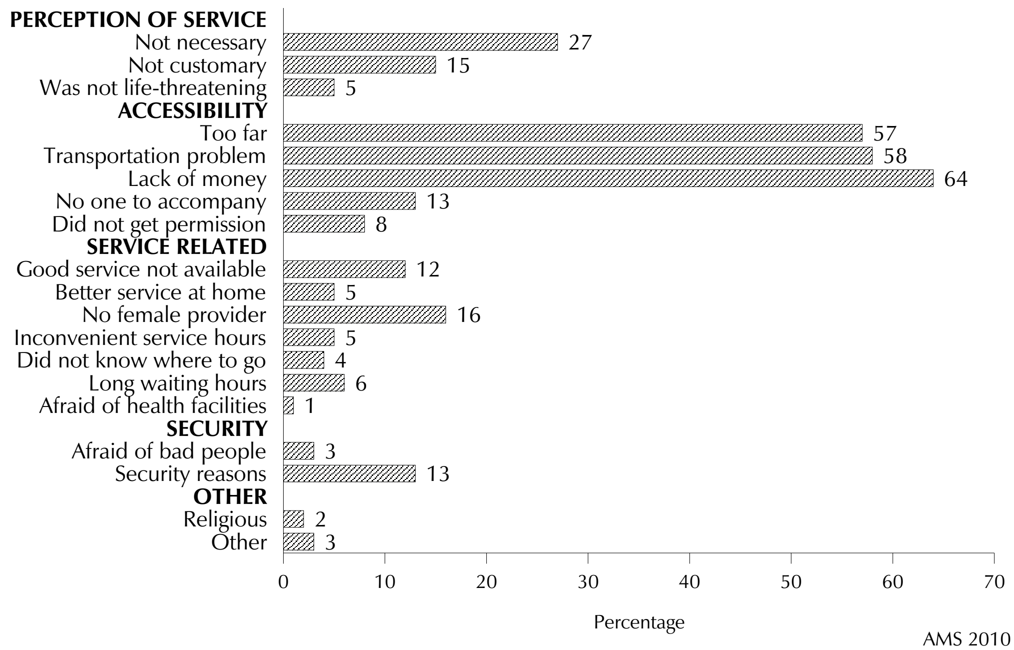


Women who experienced problems just before, during, and right after delivery were asked if they sought treatment or advice for the particular problem they experienced. About half of the women who reported facing one of the problems did not seek care for the problem. These women were asked the reason for not seeking any care. The results are shown in Figure 4.6.

Reasons that were reported can be broadly categorized into five groups, namely, perception of services, accessibility, service-related concerns, security concerns, and other reasons. The most frequently reported reason for not seeking care was access to service, which included a lack of money (64 percent), transportation problems (58 percent), and distance to the facility (57 percent). Other reasons were related to perception of need for maternity services. Some women thought that care was neither necessary (27 percent) nor customary (15 percent).

Some women also mentioned concerns related to the quality of the services, for example, not having female providers in the facilities (16 percent), or not having good service available (12 percent). Furthermore, 13 percent of these women mentioned security as a reason for not seeking care, and another 13 percent mentioned that they had no one to accompany them to the facility.

Figure 4.6 Reasons for Not Seeking Care for Problems Just Before, During, or After Delivery



Among those who sought care for problems just before, during, and after delivery, nearly two-thirds sought care from doctors (65 percent), one-third turned to nurses or midwives (32 percent), and 4 percent sought out community health workers (data not shown separately).

Eighty-seven percent of women mentioned that their condition improved after treatment for their problems just before, during, and after delivery. However, 11 percent mentioned there was no change in their condition, and 1 percent thought their condition worsened (data not shown separately). A small proportion of these women who went for treatment were referred to another facility for treatment. Of these women, 94 percent were referred to a health facility, of which 57 percent were referred to a public sector facility, and 37 percent were referred to private sector health facilities (data not shown separately).

About one in five women who were referred for treatment did not follow up on the referral primarily because of the lack of money (61 percent), long distance to the facility (47 percent), and transportation problems (36 percent).

4.3 Postnatal Care

A large proportion of maternal and neonatal deaths occur during the 24 hours following delivery. In addition, the first two days following delivery are critical for monitoring complications arising from the delivery. A postnatal care visit offers an ideal time to educate a new mother on how to care for herself and her newborn. Safe motherhood programs emphasize the importance of postnatal care, recommending that all women receive at least two postnatal checkups and iron supplementation for 45 days following a delivery. To assess the extent of postnatal care utilization, mothers were asked whether they had received a health check after the delivery for the last birth in the five years preceding the survey, when they received the first check, and what type of health provider they saw for postnatal care.

Table 4.11 shows that in the five years preceding the survey, 28 percent of women received postnatal care for their last birth. Nearly one in five women received postnatal care within four hours of delivery, more than one in five (22 percent) received care within the first 24 hours, and 2 percent of women were seen two days following delivery. Differences by mother's age, birth order, place of delivery, residence, wealth and remoteness quintiles, and education are pronounced. Young mothers less than 20 years of age, mothers of first births, women who delivered in a health facility, urban women, women in the highest wealth quintile, and highly educated mothers are much more likely to receive postnatal care within the first 24 hours than their counterparts. Women living in the Central zone, women living in the Capital region, and women from the Southern region are more likely to have received postnatal care within the first 24 hours following delivery than mothers living elsewhere. Nearly one in five women also reported that they had received a postpartum dose of vitamin A.

Table 4.11 Timing of the first postnatal checkup

Among women age 12-49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal checkup for the last live birth by time after delivery, according to background characteristics, Afghanistan 2010

Background characteristic	Time after delivery of mother's first postnatal checkup					No postnatal checkup	Total	Percentage who received vitamin A dose postpartum	Number of women
	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing				
Mother's age at birth									
<20	20.6	3.5	1.5	4.6	0.3	69.3	100.0	18.7	2,334
20-34	18.8	3.0	1.9	4.6	0.4	71.3	100.0	18.8	11,934
35-49	16.4	2.2	1.8	5.1	0.3	74.2	100.0	17.5	2,730
Birth order									
1	23.9	5.0	2.2	5.4	0.6	62.9	100.0	20.1	2,411
2-3	19.9	3.1	1.8	4.8	0.3	70.1	100.0	19.1	4,959
4-5	17.3	2.5	1.7	4.0	0.5	74.0	100.0	17.5	4,152
6+	16.3	2.2	1.8	4.8	0.4	74.6	100.0	18.2	5,475
Place of delivery									
Health facility	53.1	7.6	2.1	1.5	0.7	34.9	100.0	29.0	5,507
Elsewhere	2.1	0.7	1.7	6.2	0.2	89.0	100.0	13.6	11,450
Missing	8.2	0.0	0.0	4.0	0.0	87.8	100.0	6.4	41
Residence									
Urban	33.3	6.3	2.5	3.3	0.8	53.8	100.0	21.8	3,245
Rural	15.2	2.1	1.7	5.0	0.3	75.7	100.0	17.8	13,753
Zone									
Northern	15.6	0.8	1.5	4.9	0.4	76.8	100.0	16.5	5,346
Central	20.2	4.0	1.7	3.2	0.6	70.4	100.0	15.5	5,965
Southern	19.9	3.9	2.2	6.1	0.3	67.7	100.0	23.7	5,687
Region									
North Eastern	14.4	0.7	0.9	2.3	0.5	81.2	100.0	16.8	2,612
Northern	16.7	0.8	2.2	7.4	0.2	72.6	100.0	16.1	2,734
Western	16.3	1.5	1.2	3.3	0.5	77.1	100.0	5.6	2,269
Central Highlands	7.5	1.7	3.6	9.2	0.2	78.0	100.0	6.4	557
Capital	25.3	6.2	1.7	2.0	0.7	64.2	100.0	24.3	3,139
Eastern	22.3	3.2	1.5	2.6	0.1	70.3	100.0	31.5	3,045
Southern	26.5	3.7	3.5	8.4	0.7	57.2	100.0	22.4	1,097
South Eastern	10.7	5.3	2.7	11.2	0.3	69.8	100.0	9.4	1,545
Education									
No education	16.3	2.5	1.7	4.9	0.4	74.2	100.0	17.4	14,982
Madrassa	25.3	7.3	4.5	3.4	0.0	59.4	100.0	33.7	198
Primary	31.6	4.9	1.8	3.8	0.9	57.0	100.0	25.4	1,001
Secondary	42.6	6.7	3.6	2.5	1.1	43.5	100.0	27.2	653
Higher	51.3	7.5	3.0	1.2	0.0	37.1	100.0	31.9	164
Wealth quintile									
Lowest	6.0	0.6	1.4	4.7	0.3	87.1	100.0	10.8	3,543
Second	13.0	2.3	1.9	4.8	0.6	77.4	100.0	16.3	3,509
Middle	19.4	2.3	1.6	4.3	0.2	72.3	100.0	21.0	3,272
Fourth	22.9	3.6	1.8	5.4	0.3	66.1	100.0	22.5	3,403
Highest	33.4	6.1	2.5	4.3	0.6	53.1	100.0	22.8	3,270
Remoteness quintile									
Most remote	12.7	1.7	1.7	4.6	0.5	78.7	100.0	16.3	4,511
Second	14.8	2.7	2.2	4.8	0.2	75.3	100.0	18.0	4,737
Middle	19.7	3.1	2.0	6.2	0.2	68.8	100.0	18.4	3,310
Fourth	24.3	4.0	1.2	4.2	0.5	65.8	100.0	20.5	2,789
Least remote	34.7	4.5	1.8	2.2	0.9	55.9	100.0	23.6	1,651
Total	18.7	2.9	1.8	4.7	0.4	71.5	100.0	18.6	16,998

Table 4.12 presents information on the type of postnatal care provider by mother's background characteristics. Twenty-eight percent of mothers received postnatal care from an SBA, and less than one percent of mothers received care from a CHW. Similarly, less than 1 percent of mothers received postnatal care from a TBA. Mothers of first order births, women who delivered in a health facility, with higher education, from the wealthiest households, from the least remote households, and from urban areas are more likely than other mothers to receive postnatal care from an SBA.

Table 4.12 Type of provider of first postnatal checkup

Among women age 12-49 giving birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Afghanistan 2010

Background characteristic	Type of health provider of mother's first postnatal checkup: Doctor	Nurse/ midwife	Community health worker	Traditional birth attendant	Relative/ friend	Other	Don't know/ missing	No postnatal checkup	Total	Number of women
Mother's age at birth										
<20	16.3	13.4	0.1	0.5	0.1	0.1	0.3	69.3	100.0	2,334
20-34	15.3	12.6	0.2	0.4	0.0	0.0	0.2	71.3	100.0	11,934
35-49	14.5	10.8	0.1	0.2	0.0	0.0	0.1	74.2	100.0	2,730
Birth order										
1	20.6	15.4	0.2	0.5	0.1	0.1	0.3	62.9	100.0	2,411
2-3	15.5	13.6	0.2	0.2	0.1	0.0	0.3	70.1	100.0	4,959
4-5	13.8	11.2	0.2	0.5	0.0	0.0	0.2	74.0	100.0	4,152
6+	13.8	10.9	0.2	0.4	0.0	0.0	0.1	74.6	100.0	5,475
Place of delivery										
Health facility	33.5	31.1	0.2	0.0	0.0	0.0	0.4	34.9	100.0	5,507
Elsewhere	6.5	3.5	0.2	0.5	0.1	0.0	0.1	89.0	100.0	11,450
Missing	8.8	1.7	1.7	0.0	0.0	0.0	0.0	87.8	100.0	41
Residence										
Urban	28.8	17.1	0.0	0.1	0.0	0.0	0.2	53.8	100.0	3,245
Rural	12.1	11.3	0.2	0.4	0.1	0.0	0.2	75.7	100.0	13,753
Zone										
Northern	10.5	12.3	0.0	0.2	0.0	0.0	0.1	76.8	100.0	5,346
Central	16.9	11.5	0.2	0.6	0.0	0.1	0.3	70.4	100.0	5,965
Southern	18.0	13.6	0.3	0.3	0.1	0.0	0.1	67.7	100.0	5,687
Region										
North Eastern	7.0	11.6	0.0	0.0	0.0	0.0	0.2	81.2	100.0	2,612
Northern	13.9	12.9	0.1	0.4	0.0	0.0	0.1	72.6	100.0	2,734
Western	8.1	12.2	0.6	1.5	0.1	0.1	0.3	77.1	100.0	2,269
Central Highland	13.9	6.9	0.0	0.0	0.0	0.3	0.9	78.0	100.0	557
Capital	23.8	11.7	0.0	0.1	0.0	0.0	0.2	64.2	100.0	3,139
Eastern	17.1	12.0	0.0	0.3	0.2	0.0	0.1	70.3	100.0	3,045
Southern	18.0	22.7	1.3	0.7	0.1	0.0	0.0	57.2	100.0	1,097
South Eastern	19.9	10.2	0.0	0.0	0.0	0.0	0.0	69.8	100.0	1,545
Education										
No education	13.3	11.7	0.2	0.4	0.0	0.0	0.2	74.2	100.0	14,982
Madrassa	28.5	12.1	0.0	0.0	0.0	0.0	0.0	59.4	100.0	198
Primary	23.7	18.2	0.3	0.2	0.1	0.3	0.1	57.0	100.0	1,001
Secondary	35.2	20.8	0.1	0.4	0.0	0.0	0.0	43.5	100.0	653
Higher	49.1	13.9	0.0	0.0	0.0	0.0	0.0	37.1	100.0	164
Wealth quintile										
Lowest	6.0	6.2	0.1	0.3	0.0	0.0	0.2	87.1	100.0	3,543
Second	10.4	10.9	0.3	0.5	0.1	0.1	0.3	77.4	100.0	3,509
Middle	12.6	14.5	0.3	0.2	0.0	0.0	0.2	72.3	100.0	3,272
Fourth	18.6	14.5	0.1	0.4	0.1	0.0	0.1	66.1	100.0	3,403
Highest	29.7	16.5	0.1	0.4	0.0	0.0	0.1	53.1	100.0	3,270
Remoteness quintile										
Most remote	10.6	9.8	0.2	0.4	0.0	0.1	0.1	78.7	100.0	4,511
Second	14.1	9.7	0.2	0.5	0.0	0.0	0.2	75.3	100.0	4,737
Middle	14.5	15.7	0.3	0.4	0.0	0.0	0.2	68.8	100.0	3,310
Fourth	21.4	12.3	0.0	0.1	0.2	0.0	0.2	65.8	100.0	2,789
Least remote	22.8	21.0	0.1	0.1	0.0	0.0	0.1	55.9	100.0	1,651
Total	15.3	12.4	0.2	0.4	0.0	0.0	0.2	71.5	100.0	16,998

4.4 PROBLEMS IN ACCESSING HEALTH CARE

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers that women may face in seeking care during pregnancy and at the time of delivery. In the AMS 2010, women were asked a series of questions with respect to barriers or problems in accessing health care. The results are shown in Table 4.13.

An overwhelming majority (78 percent) of women expressed that a lack of money was an important problem in accessing health care for themselves. More than 70 percent of women also reported that distance to a facility and transportation problems were a big hindrance for accessing health service. Other problems mentioned were lack of medicines at the facility (30 percent), not having someone to accompany them (29 percent), security concerns (28 percent), and the lack of good service at the facility (27 percent). About one in five women (23 percent) expressed concern that there may not be a female health provider, and 15 percent expressed concerns over the inconvenient service hours in the facility. Relatively fewer women perceived getting permission from someone else as a barrier to seeking health care for themselves. Not surprisingly, rural women, women with no education, those from the poorest households, and those from the most remote households were more likely than other women to state that accessing health care for any reason is a big problem.

Table 4.13 Problems in accessing health care

Percentage of women age 12-49 with a birth in the five years preceding the survey who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Afghanistan 2010

Background characteristic	Problems in accessing health care: Lack of money	Too far	Transportation problem	No one to accompany	Good service not available	Drugs not available	Did not get permission	Better service at home	Did not know where to go	No female provider available	Inconvenient service hour	Afraid of bad people	Security reasons	Long waiting time	Religious reasons	Afraid of health facilities	Number of women
Age																	
< 20	73.5	70.4	72.1	28.5	21.0	27.5	15.0	9.9	8.4	16.3	12.0	12.9	27.0	17.2	5.7	7.0	875
20-34	77.0	72.1	73.0	28.8	27.5	30.3	16.4	10.3	10.6	22.7	13.7	12.3	28.1	21.2	7.4	6.4	11,864
35-49	79.9	72.2	74.3	29.9	27.9	29.4	17.8	10.3	11.6	25.1	17.9	13.3	28.9	23.1	7.1	6.6	4,259
Number of living children																	
0	80.1	77.6	73.6	20.9	22.5	26.7	17.7	7.3	12.4	20.7	8.8	13.2	28.9	11.3	2.0	2.7	127
1-2	74.0	71.2	72.2	27.5	26.1	30.7	16.0	10.6	10.1	22.3	13.4	12.9	28.2	21.0	7.0	6.4	5,419
3-4	79.0	72.0	73.3	28.4	28.3	29.8	16.0	10.5	10.5	22.4	13.6	12.0	27.4	21.3	7.5	6.6	4,792
5+	79.3	72.5	74.1	31.0	27.5	29.4	17.7	10.0	11.3	23.9	16.6	12.8	28.9	22.1	7.2	6.5	6,660
Marital status																	
Married or living together	77.5	72.0	73.3	29.1	27.3	29.9	16.7	10.3	10.8	23.0	14.7	12.6	28.3	21.4	7.2	6.5	16,898
Divorced/separated/ widowed	87.7	74.3	74.8	28.7	25.0	24.8	10.2	6.2	5.2	21.9	10.2	7.7	18.2	29.3	2.1	5.5	100
Residence																	
Urban	61.9	35.1	39.2	18.3	18.7	18.3	10.7	10.0	9.5	11.0	8.3	6.8	12.8	16.1	3.3	4.4	3,245
Rural	81.2	80.7	81.3	31.6	29.3	32.6	18.1	10.4	11.0	25.8	16.1	14.0	31.9	22.8	8.1	7.0	13,753
Zone																	
North	88.9	74.8	73.0	29.0	26.7	23.0	10.5	12.1	4.8	13.4	7.9	5.0	11.4	21.5	5.4	6.3	5,346
Central	76.3	70.8	70.5	26.7	19.2	25.2	16.3	6.9	10.9	18.7	10.6	8.2	18.7	13.7	4.0	4.3	5,965
South	68.2	70.6	76.5	31.6	36.1	41.4	22.9	12.1	16.1	36.4	25.3	24.4	54.1	29.6	12.3	8.8	5,687
Education																	
No education	79.8	74.9	76.3	30.4	28.3	31.1	17.5	10.5	11.2	24.5	15.4	13.2	29.7	22.2	7.4	6.7	14,982
Madrassa	81.7	75.4	74.1	29.6	16.2	28.8	17.5	13.2	13.7	22.0	16.2	25.5	40.1	30.3	17.4	15.8	198
Primary	64.4	53.2	53.2	20.5	20.2	21.7	11.7	8.9	7.0	12.6	9.4	7.0	17.2	16.0	4.9	4.9	1,001
Secondary	51.3	41.6	42.7	14.9	17.7	17.5	8.0	7.9	5.8	9.0	8.3	5.7	12.5	13.7	3.8	2.6	653
Higher	50.2	41.3	42.1	12.5	21.1	19.8	6.2	10.7	3.6	6.8	2.1	2.6	8.9	8.1	1.1	1.2	164
Wealth quintile																	
Lowest	94.9	89.8	88.5	31.1	29.9	32.5	15.6	11.3	9.3	24.9	11.0	9.1	13.9	15.9	6.6	5.4	3,543
Second	88.2	81.0	79.5	31.9	28.4	30.5	17.2	12.1	10.4	22.5	12.2	9.6	22.3	19.7	7.3	6.4	3,509
Middle	76.8	77.2	77.1	32.0	26.1	31.3	18.4	9.3	11.9	26.3	17.0	14.0	38.5	24.5	8.4	8.4	3,272
Fourth	70.9	68.9	74.3	30.4	28.5	31.7	18.5	8.2	11.0	26.0	20.8	18.3	42.3	27.2	8.5	7.0	3,403
Highest	55.0	41.1	45.3	19.4	22.9	23.2	13.8	10.5	11.2	14.9	12.5	12.4	25.4	20.4	5.3	5.3	3,270
Remoteness quintile																	
Most remote	87.2	83.3	83.0	30.8	26.2	28.9	14.6	8.3	8.9	22.8	13.9	8.0	19.5	19.4	6.9	5.7	4,511
Second	79.1	77.9	78.5	27.6	27.1	32.6	17.7	8.5	10.0	24.3	16.2	12.9	27.1	22.5	6.1	5.1	4,737
Middle	74.5	72.4	73.2	32.6	30.8	28.2	17.5	14.3	12.9	24.7	14.5	15.7	37.5	22.8	8.9	8.2	3,310
Fourth	71.1	60.6	65.1	29.0	31.2	35.4	18.1	11.2	12.2	26.1	16.0	16.3	37.2	21.7	7.3	7.5	2,789
Least remote	63.7	42.8	45.9	21.5	16.9	19.0	15.6	11.4	11.0	11.0	10.5	11.7	21.7	21.1	7.7	7.1	1,651
Total	77.5	72.0	73.3	29.0	27.2	29.9	16.7	10.3	10.7	23.0	14.7	12.6	28.2	21.5	7.2	6.5	16,998

4.5 CONCLUSION

Maternal and child health are strongly associated with the care received by women during pregnancy and delivery. When compared with previously conducted surveys in the country, data from the AMS 2010 show a marked increase in key maternal health indicators. For example, more than six in ten women in Afghanistan are now receiving ANC, which is more than three times the proportion of women reported to have had ANC at the time of the 2003 MICS. Around one-third of births are now being assisted at delivery by a SBA, which is more than double the level found in 2003. Over one-quarter of women received care from an SBA in the postnatal period.

Despite these gains, it is evident that substantial gaps in maternal care remain. For example, less than 16 percent of women reported having at least 4 visits, the minimum necessary to provide adequate screening for pregnancy complications. Moreover, except for blood pressure measurement, only a minority of women who had ANC—40 percent or less—report they received other components of good ANC screening. Only 38 percent took iron tablets or syrup during her pregnancy. Tetanus toxoid coverage is more widespread, but half of women did not receive two injections during pregnancy for the last birth. With regard to delivery care, access to care still represents a very considerable challenge for the majority of women, particularly rural women, with two-thirds of births taking place at home. Most postnatal care is limited to women who delivered in a health facility.

Large differentials are also evident between population subgroups. Rural women are less likely to receive care during pregnancy, at delivery or in the postnatal period than urban women. Women with no education and women in the lowest wealth quintile are the least likely to receive maternal care. The latter differentials are particularly large. For example, around nine in ten women with a secondary education saw an SBA for ANC compared with 57 percent of women with no education. Women in the highest wealth quintile are nearly six times as likely to deliver in a health facility as women in the lowest quintile.

What are the major barriers to getting maternal care? Around seven in ten women giving birth in the five-year period before the survey said that lack of money and distance to facilities pose serious problems in accessing any health care. These were also the reasons for not seeking care cited most often by women who did not get ANC, delivery care, or postnatal care during pregnancy. There also is the continuing need to educate women about the importance of seeking care; four in ten women who did not receive ANC felt it was not necessary to seek such care. Similarly, 35 percent of women who did not deliver the most recent birth in a facility said that a facility delivery was not necessary.

INFANT AND CHILD MORTALITY 5

Early childhood mortality and infant mortality, in particular, are widely used indicators of a nation's development and well-being. They improve understanding of a country's socioeconomic condition, and they shed light on the quality of life of its population. Most important, childhood mortality statistics reveal the health status of children and are thus useful for informing the development of policy and health interventions that will promote child survival. Disaggregation of this information by socioeconomic and demographic characteristics further identifies subgroups at high risk and helps to tailor programs to serve these populations.

One of the targets of Millennium Development Goal 4, which aims to improve child health, is a two-thirds reduction in under-5 mortality between 1990 and 2015. In line with this goal, and addressed in the 2008 National Development Strategy (GIRoA, 2008), the MoPH has developed several relevant strategies: the National Health and Nutrition Sector Strategy 2008-2013 (MoPH and MAIL, 2008), the National Child and Adolescent Health Strategy 2009-2013 (MoPH, 2009a), and the Basic Package of Health Services 2009-2013 (MoPH, 2009b). These strategies outline health programs and service delivery packages in facilities and target them at the community level, which focuses on cost-effective interventions. In particular, maternal interventions are implemented through improving services for women during pregnancy, delivery, and the post-partum period. Early childhood interventions promote birth spacing, neonatal care, breastfeeding and complementary feeding, immunization of mothers and children, micronutrient supplementation, integrated management of sick children, and use of long-lasting insecticidal bednets (LLINs) in areas with high transmission of malaria. A number of these interventions have shown impressive gains in recent years. For example, measles coverage rates have improved rapidly, with two-thirds of 1-year old children reported to have been immunized against measles in the 2008 assessment of the country's progress toward the achievement of MDG 4 (GIRoA, 2008). In turn, the improvements in the output indicators are believed to have resulted in a steady reduction in child mortality.

The AMS 2010 data can be used to examine the progress that Afghanistan is making in reducing child mortality. This chapter first reviews the ways in which the data on child mortality were collected in the survey, defines the childhood mortality rates discussed in the chapter, and presents the AMS 2010 findings with respect to current levels of mortality among children under age five. The chapter then discusses a number of problems that commonly affect the quality of mortality data obtained in surveys and assesses their impact on the AMS child mortality estimates. The chapter concludes with a discussion of socio-economic and demographic differentials in the mortality rates and explores how the patterns of childbearing are associated with child mortality risks.

5.1 AMS 2010 Child Mortality Data

5.1.1 Data Collection Procedures

The principal source of the data used to explore the level, trends and differentials in early childhood mortality in this chapter is the pregnancy history included in the AMS 2010 Woman's Questionnaire. As described earlier in Chapter 3, the pregnancy history data were collected by asking each of the ever-married women age 12-49 eligible for the woman's interview if she had ever given birth, and if she had, how many sons and daughters she had living with her, the number living elsewhere, and the number who had died. Each woman was also asked if she ever had a stillbirth, that is, a baby that was not born alive, and, if so, how many stillbirths she had had in her lifetime.

A detailed history of the woman's births was then recorded in chronological order, starting with the first birth. To obtain that history, the mother was asked if the baby had been born alive or dead for each birth she reported. In the case of live births, information was then obtained on whether the birth was single or multiple, the date of birth (month and year), sex and survival status. If the child was still alive at the time of the interview, the age of the child on the date of interview was obtained. If the child was no longer alive, the child's age at death was obtained. In the case of stillbirths, i.e., when the baby did not breathe or show other signs of life at birth, the mother was asked about how long the pregnancy had lasted.

In this chapter, child mortality rates are also derived from data on deaths of usual household members that occurred during the five-year period prior to the survey. The information on household deaths was obtained by asking the household respondent[1] about any deaths of usual household members that had occurred since 21 March 2005 (1 Hammal 1384). Because the Household Questionnaire did not collect information on children's birth dates, the exposure time used for calculating the child mortality rates had to be taken from other sources. For living children, it was calculated from information obtained in the household schedule. For dead children, the information on the child's birth date and age at the time of death was obtained from the Verbal Autopsy Questionnaire.[2]

5.1.2 Child Mortality Rate Definitions

The primary causes of childhood mortality shift from biological to environmental factors as children age. Thus, the information obtained in the pregnancy history about the age at death of children who were born alive but later died is used to calculate childhood mortality rates according to the following customarily defined age categories:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Postneonatal mortality (PNN): the difference between infant and neonatal mortality
- Infant mortality (${}_1q_0$): the probability of dying between birth and the first birthday
- Child mortality (${}_4q_1$): the probability of dying between exact ages 1 and 5
- Under-5 mortality (${}_5q_0$): the probability of dying between birth and the fifth birthday.

These rates are expressed as deaths per 1,000 live births except for the child mortality rate, which is expressed as deaths per 1,000 children surviving to age 1.

The data obtained on household deaths can be used to calculate infant and under-5 mortality rates but not neonatal and postneonatal mortality rates. This is because adequately detailed exposure time is available only for the dead neonates and not for the survivors since date of birth information was not collected for living children in the Household Questionnaire.

Finally, in addition to child mortality rates, the information on stillbirths from the pregnancy histories is combined with information on deaths that occurred during the early neonatal period, i.e., the

[1] In the AMS 2010, 97 percent of the household respondents were male. In contrast, all respondents to the Woman's Questionnaire were women.
[2] Two different versions of the questionnaires were used according to the age of the child at the time of death: Form 1 for infants aged 0-28 days and Form 2 for children aged 29 days to 11 years.

first seven days of life, to estimate perinatal mortality. Perinatal mortality is the number of stillbirths and early neonatal deaths per 1,000 stillbirths and live births.

5.2 LEVELS AND TRENDS IN INFANT AND CHILD MORTALITY

Table 5.1.1 presents neonatal, postneonatal, infant, child, and under-5 mortality rates for three five-year periods before the survey for Afghanistan. Because of the coverage issues described in Chapter 2 as well as other issues with the quality of the mortality data for the South zone (discussed in more detail below), rates are also presented for Afghanistan excluding the South zone. The direct estimates from data in the birth history for Afghanistan show an infant mortality rate in the five years immediately preceding the survey of 55 deaths per 1,000 live births, and an under-5 mortality rate of 71 deaths. Estimates of childhood mortality from the household death roster and the verbal autopsy data for the five years preceding the survey show a somewhat higher under-5 mortality rate of 84 per 1,000 live births (Table 5.1). The infant mortality rate derived from the household data is 65 deaths per 1,000 births.

Table 5.1.1 Early childhood mortality rates for Afghanistan

Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Afghanistan 2010

Years preceding the survey	Approximate calendar year	Neonatal mortality (NN)	Postneonatal mortality (PNN) [1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Birth history data						
0-4	2006-2010	25	29	55	17	71
5-9	2001-2005	25	28	53	20	72
10-14	1996-2000	25	32	57	24	80
Household data[2]						
0-4	2006-2010			65	20	84

Note: The years 1996-2010 in the Gregorian calendar roughly corresponds to the years 1375-1389 in the Afghan calendar.
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Neonatal and postneonatal mortality rates are not calculated from the household data. This is because adequately detailed exposure time is available only for the dead neonates and not for the survivors since date of birth information was not collected in the Household Questionnaire. Data on the movement of young children into and out of the household during the five-year period prior to the survey was used to adjust the exposure time used in calculating the infant and under-5 rates.

As Table 5.1.2 shows, the rates observed for Afghanistan excluding the South zone derived from the pregnancy history data—an infant mortality of 64 deaths per 1,000 births and an under-5 mortality rate of 83 per 1,000 births—are higher than the national rates. Similarly, the rates for Afghanistan excluding the South zone derived from the household death roster—an infant mortality rate of 76 deaths per 1,000 and an under-5 mortality rate of 97 deaths per 1,000—are higher than the national rates calculated from the household data.

Table 5.1.2 Early childhood mortality rates for Afghanistan excluding the South zone

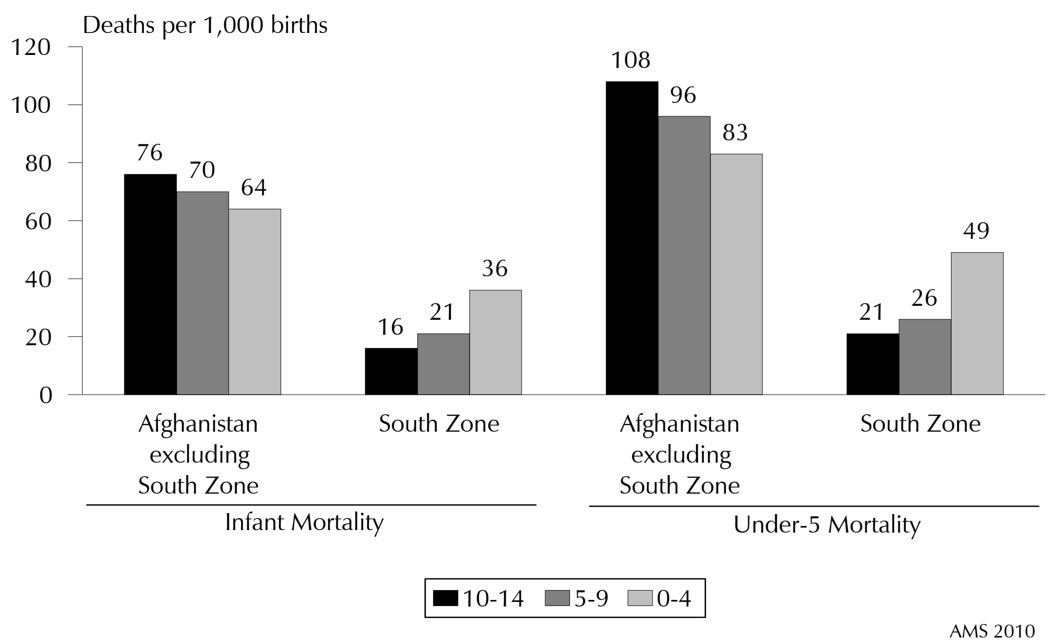
Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Afghanistan excluding the South zone, Afghanistan 2010

Years preceding the survey	Approximate calendar year	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
0-4	2006-2010	29	36	64	20	83
5-9	2001-2005	32	38	70	28	96
10-14	1996-2000	33	44	76	34	108
Household data[2]						
0-4	2006-2010			76	23	97

Note: The years 1996-2010 in the Gregorian calendar roughly corresponds to the years 1375-1389 in the Afghan calendar
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Neonatal and postneonatal mortality rates are not calculated from the household data. This is because adequately detailed exposure time is available only for the dead neonates and not for the survivors since date of birth information was not collected in the Household Questionnaire. Data on the movement of young children into and out of the household during the five-year period prior to the survey was used to adjust the exposure time used in calculating the infant and under-5 rates.

Figure 5.1, which compares mortality estimates for Afghanistan excluding the South zone to those of the South zone for three five-year periods before the survey illustrates both the magnitude of the differences in the infant and under-5 rates between the zones and also shows that the differences between the zones increases further back in time. Rates for the South zone are considerably lower than those for the rest of Afghanistan. While the rates for Afghanistan excluding the South zone decline over time, both the infant and under-5 mortality rates for the South zone increase. Given the rural and isolated character of the South zone, the pattern seems implausible and, as discussed further in the next section, reflects serious problems with the quality of the mortality data for the South zone.

Figure 5.1 Trend in Infant and Under-5 Mortality in Afghanistan Excluding South Zone and South Zone



In considering the mortality trends and differentials, it is important to bear in mind that the source of the AMS data is derived from only one of many representative samples that could have potentially been drawn from the Afghan population, using the AMS design and sample size. Each of these other samples would yield results that differ somewhat from the AMS estimates. Sampling errors provide a measure of the potential variability between all possible samples and allow an assessment of the range within which it is possible to say with a specific degree of confidence that the actual mortality rates lie. For example, the upper and lower boundaries of the 95 percent confidence interval for the under-5 mortality estimate of 83 deaths per 1,000 births derived from the birth history data for Afghanistan excluding the South zone are 77 and 89 per 1,000. This indicates that, given the sample size of the AMS 2010, the true mortality rate may lie anywhere between 77 and 89 deaths per 1,000 births. Additional information on sampling errors for the mortality estimates from the AMS 2010 as well as other indicators is presented in Appendix B.

5.3 Assessment of the AMS 2010 Early Childhood Mortality Data

5.3.1 Data Quality Measures

Several factors are important to consider in assessing and evaluating the estimates of the level of early child mortality derived from the AMS 2010; they include the completeness of the reporting of births and child deaths, the accuracy of information on the dates when children were born and, if they died, their age at death, as well as coverage of the AMS sample. Omission of births and deaths affects mortality estimates, displacement of birth and death dates affects mortality trends, and misreporting of age at death may distort the age pattern of mortality. The following discussion summarizes evidence with regard to how these various problems may affect AMS early childhood mortality rates. A more detailed technical note on issues in the estimation of infant and child mortality levels from the AMS 2010 data is included in Appendix D.

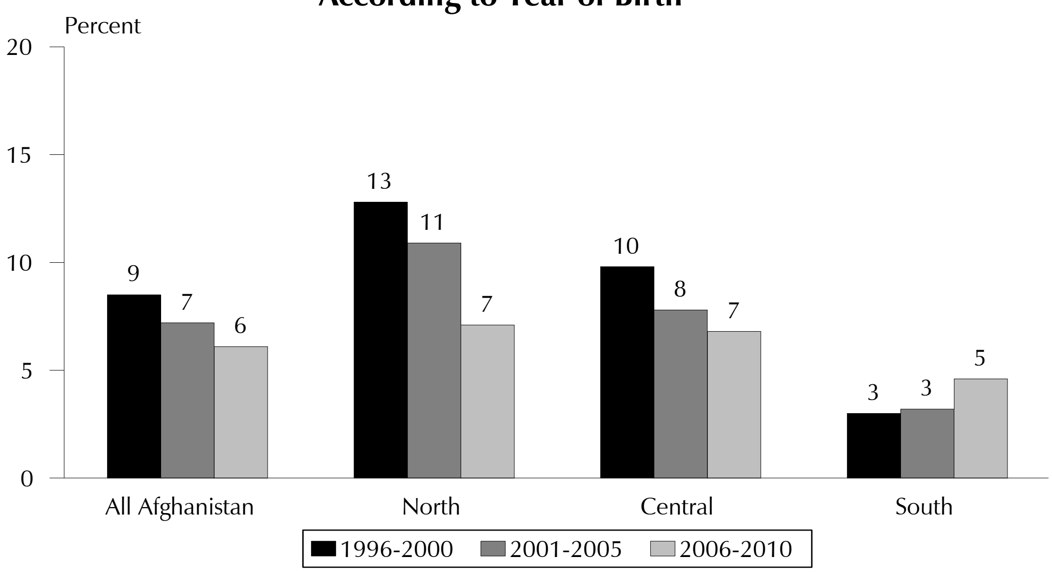
Typically, the most serious source of error in a survey that collects retrospective information on births and deaths is omission, i.e., the underreporting of these events. Chapter 3, which presents the AMS fertility results, included an assessment of the extent to which there may have been underreporting of births in the AMS. As shown in Table C.5, there appears to have been consistent underreporting of female births as evidenced by the fact that the sex ratios at birth, i.e., the number of male births per 100 female births, exceed the normal ratio (around 105 at birth) in all calendar periods. A fairly sharp drop in births in the period 0-2 years before the survey also indicates underreporting of surviving as well as dead children although it may also reflect falling fertility.[3] Both the abnormal sex ratios and the drop in recent births were much more evident in the South zone than in the North and Central zones.

Omission of births would not represent a problem for mortality estimation if women underreported surviving and dead children at the same rate. However, dead children are typically disproportionately represented in any omitted births because mothers are reluctant to talk about their dead children due to sorrow or guilt associated with their deaths or because their culture discourages discussion of the deceased.

[3] The age distribution of living children in the household schedule also showed substantially smaller numbers of children ages 0 and 1 compared to older children, reinforcing the conclusion that there was underreporting of living children in the youngest age groups.

There is evidence of substantial underreporting of deaths in the South zone. This can be seen in Figure 5.2 which shows the proportion of all births that were reported to have died by year of birth grouped in five-year calendar periods. This proportion would be expected to decrease closer to the time period before the survey due to a lower duration of exposure to mortality, the more recent the birth, and due to an expected decline in mortality rates over time. The expected pattern is clearly seen in the North and Central zones. The south zone, on the other hand, shows a generally rising pattern. Moreover, looking at the calendar period immediately before the survey, the proportion dead among all reported births is 5 percent compared to 7 percent in the North and Central zones. The lower proportion is surprising given the more isolated character of the South zone. Although the pattern may be in small part due to the urban bias in the sample coverage in the South zone, it points to substantial underreporting of child deaths in the South zone, even in the period immediately before the survey.

Figure 5.2 **Percentage of All Births Reported as Having Died According to Year of Birth**



Note: The years 1996-2010 in the Gregorian calendar correspond roughly to the years 1375-1389 in the Afghan calendar.

AMS 2010

The observed increases in the percentage dead among all births for the North and Central regions shown in Figure 5.1 are more plausible than the pattern observed for the South zone and suggest that the mortality estimates for Afghanistan excluding the South zone are more robust. Nevertheless, a more detailed review of the AMS mortality data is warranted to asssess the extent to which the mortality estimates for Afghanistan excluding the South also may have been affected by omission and other data quality issues.

One approach to detecting omission is to look for evidence of sex selectivity in the reporting of childhood deaths. A simple measure of sex selectivity is the ratio of deaths among male births to those among female births. Unlike the sex ratio of births, for which the range is assumed to be between 103 and 107, the interpretation of the sex ratio of deaths is more complex. This is because, for biological reasons, boy deaths outnumber girl deaths, and no simple standard exists for assessing if a given sex ratio of deaths exceeds (or is lower than) what might naturally be expected, and, thus, indicates selective omission of girl (or boy) deaths. To assess sex selective underreporting of deaths, it is, therefore, better to use the sex ratio of mortality, which can be calculated by dividing the sex ratio among child deaths by the sex ratio of births. Model life tables are used to evaluate if the sex ratio of mortality exceeds the expected ratio for a given childhood mortality rate. Some evidence of sex selectivity in the AMS child mortality data was found in Afghanistan excluding the South zone. As reviewed in Appendix D, males appeared to have been underreported, with the problem of underreporting concentrated in the North zone.

The age pattern of deaths in infancy also can be examined for evidence of omission. This is based on the assumption that omission occurs more often for children who died immediately after birth compared with those who lived longer. Selective underreporting of early neonatal deaths would result in an abnormally low ratio of deaths within the first seven days of life for all neonatal deaths. There are no model mortality patterns for the neonatal period; however, one review of data from several developing countries concluded that, at levels of neonatal mortality of 20 per 1,000 or higher, approximately 70 percent of neonatal deaths occur within the first six days of life (Boerma, 1988). An abnormally low proportion of neonatal to all infant deaths also provides evidence of selective omission of early infant deaths. In countries with high levels of infant mortality due to high post-neonatal mortality, about half of infant deaths can occur in the neonatal period. As mortality falls in a society, the ratios of early neonatal to all neonatal and neonatal to postneonatal deaths are expected to increase as public health programs prevent and successfully treat the infectious diseases, which are the most common causes of death later in infancy and early childhood. An examination of the ratios of early neonatal to all neonatal deaths and of neonatal to all infant deaths for Afghanistan excluding the South (see Table C.6 and C.7) indicate that the ratios fall within the expected range and generally have increased over time.

The ratio of neonatal to postneonatal deaths provides perhaps a more sensitive indicator of selective underreporting of deaths in the neonatal period. As can be seen in Figure D.5, which charts the ratios for the periods 0-4 and 5-9 years before each of 209 DHS surveys, this ratio rises as the level of under-5 mortality falls. The neonatal-postneonatal (NN/PNN) ratios observed for other countries at levels of under-5 mortality similar to that found in the AMS for Afghanistan excluding the South zone (83 per 1,000) are generally higher than the ratio observed in the AMS excluding the South zone (0.8). A regression curve fitted to the data for the 209 surveys can be used to derive a NN/PNN ratio for Afghanistan excluding the South zone which takes into account the global pattern.[4] The predicted NN/PNN ratio is 1.09. Applying this ratio to the postneonatal rate yields an adjusted neonatal rate of 39, which implies that neonatal deaths were underreported by around one-third.

Finally, another area of concern in estimating mortality levels from birth history data is misreporting of the dates of birth. Errors in birth date reporting affect period mortality estimates if they shift children who died above or below the boundaries of the reference periods used for calculating those estimates. Such problems are of particular concern since experience in other surveys has indicated that they may result at least partially from deliberate interviewer transference of births out of the period prior to the survey for which detailed health questions about births are asked as is the case in the AMS. An examination of the distribution of births and deaths by the calendar year prior to the survey in Table C.5 shows no evidence of serious displacement.

5.3.2 Effect of Data Quality Issues on AMS Child Mortality Estimates

Additional analysis of the AMS 2010 results as well as comparisons with other data sources are necessary in order to finalize estimates of current child mortality levels in Afghanistan. However, it is possible in this report to assess the potential effect of the data quality issues described above on the AMS mortality results and to provide some insight into the range within which the AMS results suggest child mortality levels in Afghanistan may lie.

[4] For more detail, see Appendix D.

The first step in the assessment process involves evaluating the potential effects of omission on the mortality estimates for Afghanistan excluding the South zone. In this regard, the review of data quality problems summarized above identified two major areas of concern with the mortality data for Afghanistan excluding the South zone: (1) an apparent omission of living children in the two years immediately prior to the survey evident in both the household schedule and birth history data and (2) underreporting of neonatal deaths. In view of the possible omission of living children in the youngest age ranges, a better estimate of child mortality may be obtained by using the rates for the period 2-6 years prior to the survey (circa 2004-2008) instead of the traditional 0-4 years. A comparison of the results in Table 5.2 with the rates presented in Table 5.1.2 indicates that the mortality rates for Afghanistan excluding the South zone during the period 2-6 years are only slightly higher than the rates for the period 0-4 years (infant mortality of 67 versus 64 and an under-5 rate of 87 versus 83). The results are in line with a slow downward trend in fertility and, notably, do not suggest that the omission of births in the period immediately prior to the AMS was substantially greater in the case of dead than living children.

Table 5.2 Early childhood mortality rates for Afghanistan excluding the South zone for the period 2-6 years prior to survey

Unadjusted and adjusted neonatal, postneonatal, infant, child, and under-5 mortality rates for the preceding the survey, Afghanistan excluding the South zone, Afghanistan 2010

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
2-6 years (unadjusted)	30	37	67	22	87
2-6 years (adjusted[2])	40	37	77	22	97

Note: The reference period corresponds to the years 2004-2008 in the Gregorian calendar, which is roughly equivalent to the years 1383-1387 in the Afghan calendar.
[1] Computed as the difference between the infant and neonatal mortality rates
[2] For presumed underreporting of neonatal deaths

The data quality assessment above also found that the ratio of neonatal to postneonatal deaths in the mortality results for Afghanistan excluding the South (0.8) was quite low in comparison to ratios found in DHS surveys at a similar mortality level, suggesting a substantial underreporting of neonatal deaths. Applying a more plausible NN/PNN ratio of 1.09 that was derived taking into account data from 209 DHS surveys to results in Table 5.2 raises the estimates of neonatal mortality in Afghanistan excluding the South zone to 40 deaths per 1,000, the infant mortality rate to 77 deaths per 1,000, and the under-5 mortality rate to 97 deaths per 1,000.[5]

The results presented in Table 5.2 represent the child mortality situation for Afghanistan excluding the South zone, an area that comprises roughly two-thirds of the population of Afghanistan. To obtain a national estimate, information also is needed on the mortality situation among young children in the South zone. Unfortunately, due to both coverage problems and data quality issues, the AMS child mortality results for the South zone cannot be used in estimating rates for Afghanistan as a whole. Thus, a variety of other factors that traditionally influence mortality levels will have to be evaluated for the South zone and used to derive child mortality estimates for the zone. These range from socioeconomic measures, e.g., wealth and education, which are typically inversely related to early childhood mortality. With regard to wealth, households in the South zone that were surveyed in the AMS were generally wealthier than households in the Central or especially the North zones; e.g., 88 percent of the population in the South zone fell within the three highest quintiles on the wealth index compared to 58 percent in the

[5] Indirect estimates based upon the questions on the number of children ever born and surviving yield roughly similar rates for Afghanistan excluding the South (an infant rate of 71 deaths per 1,000 and an under-5 rate of 98 per 1,000). See Appendix D for a more complete discussion.

Central zone and 32 percent in the North zone (Table 2.8). On the other hand, female education levels are lower in the South than in the other zones; 87 percent of women age 12-49 years surveyed in the AMS in the South zone never attended school compared to 67 percent and 75 percent in the Central and North zones, respectively (Table 2.13). Other factors external to the immediate household situation also obviously have potential to influence early childhood mortality levels in the South as well as the other zones including the availability of health care services and the extent to which the security situation limits access to existing services.

A full evaluation of the various factors that are likely to influence mortality levels in the South zone is beyond the scope of this report and, thus, it is not possible to provide national child mortality estimates for Afghanistan as a whole. However, the results for Afghanistan excluding the South zone provide a basis for considering the implications of various assumptions with respect to child mortality levels within the South. For example, if we assumed that the under-5 mortality in the South zone is 15 percent higher (112 deaths per 1,000) than the under-5 mortality for Afghanistan excluding the South zone (97 deaths per 1,000), than the under-5 mortality rate for Afghanistan as a whole would be an estimated 102 deaths per 1,000. Similarly, assuming the rate for the South zone is 121 deaths per 1,000, i.e., 25 percent higher than the adjusted level for Afghanistan excluding the South zone, the national rate would be 105 deaths per 1,000. Given that the South zone includes only around one-third of the country's population, an assumption of even substantial excess mortality in the South zone only results in a comparatively modest potential effect on the national rate.

In any mortality estimation process adjustments have to be made for known biases to obtain the best estimate. The Government of Afghanistan together with the UN and other partners may consider the full array of survey data and methods to come up with 'best estimates' of the trend in child mortality in Afghanistan.

5.4 Differentials in Childhood Mortality

Because the national rates are so clearly downwardly biased by the problems with the mortality data for the South zone, the following discussion of the trends and differentials in mortality levels will focus on the patterns observed in the results for Afghanistan excluding the South zone.

5.4.1 Socioeconomic Differentials

Table 5.3 shows differentials in childhood mortality for Afghanistan excluding the South zone by key socioeconomic variables including residence, mother's education, and the wealth and remoteness quintiles.

Infant and child survival are clearly associated with the socioeconomic characteristics of the household and of mothers. Mortality rates are consistently lower in urban areas than in rural areas. Rates in the Capital region also are consistently lower than the rates in other regions. Infant and under-5 mortality rates are higher in the Western region than in other areas.

As expected, mother's education inversely relates to a child's risk of dying. The relationship between under-5 mortality and wealth is also as expected: children born to mothers in the highest wealth quintile have half the risk of those born to mothers in the poorest wealth quintile (49 and 106 per 1,000 live births, respectively). Although not uniform, under-5 mortality levels decreased with the remoteness quintile from 93 per 1,000 births in the most remote quintile to 60-69 per 1,000 in the two least remote quintiles. This indicates that as expected better access to service centers improves the probability that a child will survive.

Table 5.3 Early childhood mortality rates by socioeconomic characteristics for Afghanistan excluding the South zone

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 5-year period preceding the survey, by background characteristic, Afghanistan excluding the South zone, Afghanistan 2010

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Residence					
Urban	24	24	47	10	57
Rural	30	40	70	23	91
Zone					
North	30	39	69	19	86
Central	28	33	61	20	80
Region					
North Eastern	31	36	66	19	84
Northern	29	42	71	19	89
Western	36	39	75	25	98
Central Highlands	38	35	74	17	89
Capital	21	29	50	18	67
Mother's education					
No education	29	38	67	21	86
Madrassa	(24)	(19)	(43)	(42)	(83)
Primary	33	19	52	7	59
Secondary	(25)	(24)	(49)	(5)	(54)
Higher	11	14	25	13	37
Wealth quintile					
Lowest	39	46	85	23	106
Second	27	37	63	24	86
Middle	26	41	66	22	87
Fourth	25	23	48	13	60
Highest	18	21	39	10	49
Remoteness quintile					
Most remote	35	39	74	20	93
Second	29	39	68	22	89
Middle	23	34	57	20	76
Fourth	21	28	49	12	60
Least remote	24	29	54	17	69

Note: Figures in parentheses are based on 250-499 unweighted months of exposure.
[1] Computed as the difference between the infant and neonatal mortality rates

5.4.2 Demographic Differentials

Infant and child mortality is influenced to a considerable extent by the demographic characteristics of mothers and children, including the sex of the child, mother's age at birth, birth order, length of the previous birth interval, and the size of the child at birth. The relationship between these demographic characteristics and mortality is shown in Table 5.4 for Afghanistan excluding the South zone.

Table 5.4 Early childhood mortality rates by demographic characteristics for Afghanistan excluding the South zone

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 5-year period preceding the survey, by demographic characteristics, Afghanistan excluding the South zone, Afghanistan 2010

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Child's sex					
Male	33	37	70	20	88
Female	24	34	59	20	77
Mother's age at birth					
<20	36	34	70	17	86
20-29	26	34	60	19	78
30-39	28	39	66	21	86
40-49	39	54	93	46	135
Birth order					
1	38	30	68	13	80
2-3	24	32	57	16	72
4-6	26	38	64	21	84
7+	31	44	75	29	102
Previous birth interval[2]					
<2 years	27	39	66	17	82
2 years	21	23	43	7	50
3 years	33	41	74	26	99
4+ years	26	38	64	23	86

[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births

Boys have a slightly higher risk of dying than girls at every age, which is considered a normal pattern. As expected, the relationship between maternal age at birth and childhood mortality is generally U-shaped, being relatively high among children born to mothers under age 20 and at age 40-49 compared to mothers in the middle age groups. Similarly the relationship between birth order and mortality is generally U-shaped; first births and births of order 7 and higher suffer higher rates of mortality than births of orders 2 and 3. Children born two years after a previous birth have the highest chance of survival.

5.5 Perinatal Mortality

The survey asked women to report on any pregnancy loss that occurred in the five years preceding the survey. For each pregnancy that did not end in a live birth, the duration of pregnancy was recorded. In this report, perinatal deaths include pregnancy losses of at least seven months' gestation (stillbirths) and deaths to live births within the first seven days of life (early neonatal deaths). The perinatal mortality rate is the sum of stillbirths and early neonatal deaths divided by the sum of all stillbirths and live births. Information on stillbirths and deaths to infants within the first week of life are highly susceptible to omission and misreporting. Nevertheless, retrospective surveys in developing countries can provide more representative and accurate perinatal death rates than the vital registration systems and hospital-based studies.

Out of the approximately 20,000 pregnancies of at least seven months' gestation that were reported for Afghanistan excluding the South zone during the five years preceding the survey, Table 5.5 shows that 402 were stillbirths and 409 were early neonatal deaths, yielding an overall perinatal mortality rate of 42 per 1,000 pregnancies. This is the first national survey to estimate the perinatal mortality rate in Afghanistan, so it is not possible to compare the current level with other survey data.

Table 5.5 Perinatal mortality for Afghanistan excluding the South zone

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Afghanistan excluding the South zone, Afghanistan 2010

Background characteristic	Number of stillbirths	Number of early neonatal deaths	Perinatal mortality rate (per 1,000)	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	76	84	48	3,331
20-29	196	212	38	10,743
30-39	106	95	42	4,780
40-49	24	19	67	635
Previous pregnancy interval in months				
First pregnancy	84	93	53	3,330
<15	78	50	62	2,082
15-26	101	129	39	5,891
27-38	75	77	34	4,515
39+	63	60	34	3,671
Previous parity				
0	87	90	52	3,391
1-2	121	112	39	6,039
3-4	63	87	32	4,678
5-6	61	55	38	3,027
7+	70	65	57	2,355
Residence				
Urban	97	83	39	4,557
Rural	305	327	42	14,932
Zone				
Northern	145	193	38	8,997
Central	257	216	45	10,492
Region				
North Eastern	76	104	40	4,523
Northern	69	89	35	4,474
Western	65	96	43	3,788
Central Highlands	43	26	74	928
Capital	148	94	42	5,776
Mother's education				
No education	357	353	42	17,009
Madrassa	3	3	49	128
Primary	27	32	46	1,306
Secondary	14	18	38	846
Higher	0	2	13	200
Wealth quintile				
Lowest	125	171	50	5,978
Second	101	93	39	4,995
Middle	69	53	42	2,892
Fourth	53	44	42	2,306
Highest	54	48	31	3,319
Remoteness quintile				
Most remote	147	158	49	6,176
Second	117	122	42	5,681
Middle	70	60	37	3,537
Fourth	34	34	32	2,110
Least remote	33	36	35	1,985
Total	402	409	42	19,489

The patterns of perinatal mortality are in the expected directions. Mortality is higher among women whose age at delivery was either under 20 years or especially 40-49 years. First pregnancies and pregnancies that end after an interval of less than 15 months are more likely than pregnancies that end after longer intervals to end in a perinatal loss. There is little difference in perinatal loss among urban and rural women. Perinatal mortality is lowest among women in the highest wealth quintile and those in the fourth and least remote quintiles.

5.6 PATTERNS OF CHILDBEARING ASSOCIATED WITH HIGH CHILD MORTALITY RISKS

The survival of infants and children depends in part on the demographic and biological characteristics of their mothers. Typically, the probability of dying in infancy is greatest among children born to mothers who are young (under age 18) or old (over age 34); children born after a short birth interval (less than 24 months after the preceding birth); and children born to mothers of high parity (more than three children). The risk is further elevated when a child is born to a mother who has multiple risk characteristics.

The first column in Table 5.6 shows the percentage of births (excluding the South zone) occurring in the five years before the survey that fall into the various risk categories. Seventy-two percent of births in Afghanistan are at an elevated but avoidable risk of dying, while 16 percent are in a “risk-free” category. First births to mothers age 18-34, which make up 12 percent of births, are in the “unavoidable” risk category. Forty-three percent of births are in a single high-risk category, and 29 percent are in a multiple high-risk category. The most common single high-risk category is births of order 4 and higher (25 percent), while the most common multiple high-risk category is births to mothers occurring less than 24 months after a prior birth and of birth order 4 and above (15 percent).

The risk ratios displayed in the second column of Table 5.6 denote the relationship between risk factors and mortality. In general, risk ratios are higher for children in a multiple high-risk category than for children in a single high-risk category. The most vulnerable births are those to women age 34 or older, especially if they have a birth interval less than 24 months and a birth order of 3 or higher. This group of children is more than twice as likely to die early as children not in any high-risk category.

The last column of Table 5.6 shows by category the distribution of currently married women who have the potential for having a high-risk birth. This column is purely hypothetical and does not take into consideration the protection provided by family planning, postpartum insusceptibility, and prolonged abstinence. However, the data provide insight into the magnitude of high-risk births. Eighty percent of currently married women are in categories that would put them at potential high and avoidable risk were they to get pregnant. A higher proportion of women (47 percent) have the potential for having a birth in a multiple high-risk category than in a single high-risk category (33 percent).

Table 5.6 Patterns of childbearing associated with high child mortality risks

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Afghanistan excluding the South zone, Afghanistan 2010

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	16.2	1.0	12.7[a]
Unavoidable risk category			
First-order births between ages 18 and 34 years	12.1	1.3	7.2
Single high-risk category			
Mother's age <18	5.6	1.3	1.5
Mother's age >34	0.2	2.0	2.2
Birth interval <24 months	12.0	1.5	9.1
Birth order >3	25.3	1.0	20.0
Subtotal	43.2	1.2	32.7
Multiple high-risk category			
Age <18 and birth interval <24 months [2]	1.3	1.5	0.3
Age >34 and birth interval <24 months	0.1	(1.4)	0.1
Age >34 and birth order >3	9.1	1.4	28.5
Age >34 and birth interval <24 months and birth order >3	2.9	2.4	5.1
Birth interval <24 months and birth order >3	15.2	1.8	13.5
Subtotal	28.6	1.8	47.4
In any avoidable high-risk category	71.7	1.4	80.1
Total	100.0	na	100.0
Number of births/women	19,699	na	16,923

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births *not in any high-risk category*. Numbers in parentheses are based on 25-49 unweighted births in the denominator of the ratio.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months (birth prior to 18 years of age) or older than 34 years and 2 months (birth at 35 years or older), latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category age <18 and birth order >3
[a] Includes sterilized women

5.7 CONCLUSION

The AMS 2010 was the first survey in Afghanistan to include a full pregnancy history and, thus, the first survey to employ direct techniques in the estimation of childhood mortality rates. In this chapter, several issues with the quality of the mortality data are identified that adversely affect the childhood mortality estimates derived from the pregnancy history data. First is the impact of not being able to interview around one-third of the AMS rural sample in the South zone due to security concerns. The missed households were concentrated predominantly in the South zone and, as a result, households living in urban areas and more secure rural areas are overrepresented in the AMS 2010 sample. In addition to the coverage problems, an examination of the data from the AMS birth histories found severe omission of death in the South zone. Omission, especially of deaths in the neonatal period, also appears to have been a problem for areas outside the South zone although not nearly as severe as in the South zone. The under-5 mortality rate for Afghanistan excluding the South zone adjusted to take into account omission is 97 deaths per 1,000 births and the infant mortality rate is 77 deaths per 1,000 births. Assuming that child mortality rates in the South zone are 15-25 percent higher than in the rest of the country, under-5 mortality for the whole country might be in the 102-105 range.

Despite the data quality issues, the AMS 2010 is the most comprehensive survey to date of mortality in Afghanistan, and the results show that childhood mortality in the country is high. In addition, the survey identifies a number of factors that increase mortality risks for young children. As expected, boys have a higher risk of dying than girls. The survival of infants and children also is strongly influenced by the mother's age at birth; mortality is higher among children born to mothers under age 20 and age 40-49 than children born to mothers in the middle age ranges. Short birth intervals reduce a child's chance of survival; children born within two years of a previous birth are one and a half times as likely to die during the first year of life when compared to children born two years after an older sibling.

Several socioeconomic factors also influence a child's risk of dying. Urban children have a lower mortality risk than rural children. As expected, mothers' education is inversely related to mortality levels among young children. Wealth is very strongly related to child mortality: children born to mothers in the highest wealth quintiles have less than half the risk of dying as those born to mothers in the poorest quintile. Mortality levels are also generally lower for less remote areas.

ADULT MORTALITY 6

For several decades, cross-sectional household surveys have been used to provide reliable estimates of childhood mortality rates. More recently, however, as the demographic and epidemiological transitions evolve, and as vital registration systems continue to lag in quality and completeness, there is increasing demand in many countries for reliable adult mortality estimates from national household surveys.

Estimates of adult mortality from a household survey can come from a variety of responses. In the AMS 2010, three types of responses are used. The respondent to the Household Questionnaire was asked about all deaths to persons who were household members during the five years preceding the interview. The respondent to the Woman's Questionnaire was asked about the survival of all her brothers and sisters that were born to her mother (known as a sibling history). Using each of these sources, direct estimates of adult mortality are calculated. Additionally, the household respondent was asked about the survival of the birth mother and birth father of each household member. This information can be used to determine adult mortality levels indirectly by making use of patterns of mortality incorporated in model life tables. All three information sources can provide estimates of adult mortality by age and sex; however, they vary in the date to which the resulting rates apply. In an assessment of data quality, results from the direct and indirect estimates in the AMS 2010 are compared with each other as well as with other estimates of adult mortality in Afghanistan and in the region.

In this chapter, several measures of mortality are presented:

- Age-specific mortality rates (ASMR): the total number of deaths per year per 1,000 people of a given age, or age group
- Adult mortality rate (${}_{45}q_{15}$): the probability of a 15-year old dying by the 60th birthday
- Reproductive age mortality (${}_{35}q_{15}$): the probability of a 15-year old dying by the 50th birthday.

Other common measures of mortality also presented in this chapter are as follows:

- Crude death rate (CDR): the total number of deaths per year per 1,000 people
- Life expectancy at birth (e_0): the average number of years to be lived by a group of people born in the same year, if mortality at each age remains constant.

Household rosters provide information on all usual members of the household and on former members who died in the five years prior to the survey. This information provides mortality estimates that correspond to the most recent five-year period, approximately mid-2005 to mid-2010 (which roughly corresponds to the years 1384-1389 in the Afghan calendar).

Information for indirect estimates is derived from two simple questions asked of every member in the household: the survival status of the biological mother and the biological father. Information from this source provides historical estimates that extend back 20 years.

To identify potential data quality issues related to adult mortality, an initial assessment of the completeness of household death data was done by applying the Brass Growth Balance Method (Brass, 1975) and by comparing estimates between reporting sources within the AMS 2010 (household information was usually reported by a male respondent to a male interviewer, and birth history and sibling information was reported by an eligible woman to a female interviewer) as well as other independent sources. The preliminary data quality assessment suggests omissions in reporting of deaths.

Finally, because analysis and presentation of adult mortality statistics from cross-sectional surveys is still in its early stages compared with analysis of childhood mortality statistics, it would be beneficial if the data from this survey could lead to further developments in standardizing methodologies for collecting, analyzing, and presenting results pertaining to adult mortality. There is, at present, a paucity of comparable information within and between countries, an increasingly noticeable gap of evidence in a field of growing importance, especially in light of changing risk patterns and aging populations.

6.1 Levels and Trends of Adult Mortality

6.1.1 Adult Mortality from Sibling Deaths

One source of direct estimates of male and female adult mortality is information collected in the sibling history from the Woman's Questionnaire. The sibling history provides information reported by eligible women, age 12-49, on all brothers and sisters, whether alive or dead. It is possible to derive mortality trends for periods over the past 15 years because information on siblings of eligible women span several decades. From this information, age-specific death rates are computed by dividing the number of deaths in each age group by the total number of person-years of exposure in that age group, during a time period. In the chapter, reports from respondents 15-49 are used to compare with external sibling histories. In total, respondents age 15-49 enumerated 230,994 siblings, of whom 107,412 were sisters and 123,582 were brothers (Appendix Table C.10).

Table 6.1 shows age-specific mortality rates for adults age 15-59 years for the seven-year period prior to the survey. For both sexes, as expected, mortality is lower among adults in the younger age groups where death rates rarely exceed 1 to 3 per 1,000, until it starts to rise after around age 50. It is noted that estimates from the sibling history do not provide reliable estimates for age groups 50 years and older. This is largely because information on the exposure to risk is greatly diminished due to relatively fewer eligible women respondents (age 15-49) in older age groups (and thus fewer siblings are recorded). There is also selection bias since the survivors are likely to have lower mortality among their siblings. Thus, while the sibling history appears to be an adequate instrument for measuring mortality during the reproductive ages, for populations with a young age distribution, such as Afghanistan and many developing countries, it is not the most efficient method for measuring adult mortality beyond age 50.

As a summary measure of mortality, Table 6.1 presents the probability of dying for two age ranges: ${}_{35}q_{15}$ is the probability of a 15-year old dying during the reproductive ages, 15-49 completed years (exact ages 15-50 years); ${}_{45}q_{15}$ is the probability of dying between 15-59 completed years (exact ages 15-60 years). The probability of dying during the reproductive ages is 63 per 1,000 for women, and 71 per 1,000 for men in the 0-6 years prior to the survey. Again, although results are less reliable for the older age groups (as indicated by the parentheses around the estimates), it appears that mortality rises substantially as adults approach age 60 years: to 125 per 1,000 for women and to 156 per 1,000 for men. Due to the coverage issues described in Chapter 1 as well as other issues with the quality of the mortality data for the South zone described in the earlier chapters, Table 6.1 also presents recent levels of adult mortality for Afghanistan without the South zone. For women 15-49, the probability of dying is just slightly lower for Afghanistan excluding the South zone (62) than for the country as a whole (63). Similarly, the probability of dying for women 15-59 in Afghanistan excluding the South zone is lower at 122 deaths per 1,000 than for the country as a whole (125). A similar pattern is observed for men.

Table 6.1 Recent levels of adult mortality (sibling deaths)

Direct estimates of age-specific mortality rates and probabilities of dying for females and males age 15-49 and 15-59 based on the survivorship of sisters and brothers of female respondents for the period 0-6 years prior to the survey, Afghanistan 2010

	Deaths	Exposure	Mortality rates (per 1,000)
FEMALE			
Age			
15-19	122.8	110,187	1.1
20-24	117.6	98,458	1.2
25-29	95.1	81,164	1.2
30-34	92.6	61,521	1.5
35-39	68.6	43,903	1.6
40-44	79.8	25,599	3.1
45-49	44.4	13,713	3.2
50-54	30.7	4,442	(6.9)
55-59	9.6	1,400	(6.8)
Probability of dying			
All Afghanistan			
15-49 ($_{35}q_{15}$)			63
15-59 ($_{45}q_{15}$)			125
Afghanistan (excluding the South zone)			
15-49 ($_{35}q_{15}$)			62
15-59 ($_{45}q_{15}$)			122
MALE			
Age			
15-19	151.9	121,531	1.2
20-24	245.5	116,781	2.1
25-29	169.4	95,976	1.8
30-34	151.6	71,740	2.1
35-39	105.7	51,790	2.0
40-44	78.2	30,603	2.6
45-49	50.4	17,348	2.9
50-54	55.7	6,331	(8.8)
55-59	20.2	1,938	(10.4)
Probability of dying			
All Afghanistan			
15-49 ($_{35}q_{15}$)			71
15-59 ($_{45}q_{15}$)			156
Afghanistan (excluding the South zone)			
15-49 ($_{35}q_{15}$)			67
15-59 ($_{45}q_{15}$)			153

Note: A figure in parentheses indicates a less reliable estimate, with a relative error of 20 percent or more.

The sibling history based on respondents up to age 49 can provide estimates of trend in mortality for a few years prior to the survey. In Table 6.2 age-specific mortality rates for adults age 15-59 years are shown for three five-year periods preceding the survey. The decline in adult mortality is noticeable across all age groups but is especially marked among older age groups (age 40 and above) of adults. The estimates for older age groups, however, must be interpreted with caution since they are less reliable due to larger sample variations. There is a decreasing trend in mortality for both sexes over the three five-year periods. For women of reproductive age 15-49 ($_{35}q_{15}$), mortality rates for Afghanistan have fallen by nearly half, dropping from 103 deaths per 1,000 in the 10-14 years before the survey to 52 per 1,000 in the 0-4 years before the survey (Figure 6.1). Similarly, male adult mortality for the same age group has fallen from 118 deaths to 71 deaths over the same period. A similar decline in mortality is seen among women and men age 15-59 ($_{45}q_{15}$), with even sharper declines in male than female mortality, where mortality halved in roughly a decade. The decline in adult mortality for Afghanistan excluding the South zone shows a similar trend with men's mortality for both age groups and women's reproductive-age mortality falling by half in the period 0-4 years prior to the survey from what it was about ten years earlier.

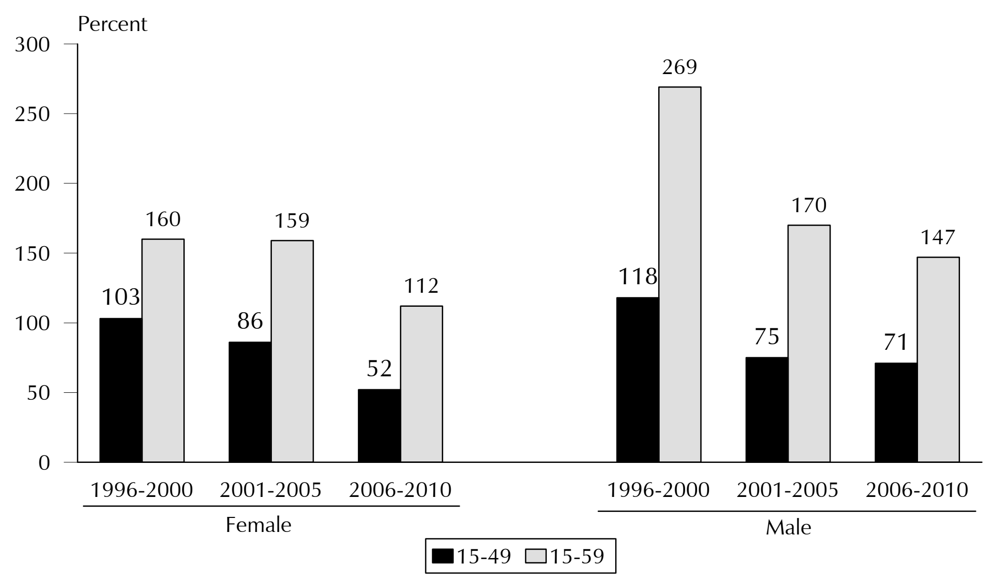
Table 6.2 Trends in adult mortality (sibling deaths)

Direct estimates of age-specific mortality rates and probabilities of dying for females and males age 15-49 and 15-59 based on the survivorship of sisters and brothers of female respondents for three five-year periods prior to the survey, Afghanistan 2010

	Female mortality rate (per 1,000)			Male mortality rate (per 1,000)		
	10-14 years 1996-2000	5-9 years 2001-2005	0-4 years 2006-2010	10-14 years 1996-2000	5-9 years 2001-2005	0-4 years 2006-2010
Age						
15-19	1.2	1.4	1.0	1.9	1.0	1.4
20-24	2.1	1.7	1.0	3.0	2.2	2.2
25-29	1.3	2.4	0.9	2.0	1.7	1.6
30-34	2.0	2.2	1.3	2.6	1.6	2.4
35-39	3.7	2.0	1.3	3.0	1.9	1.9
40-44	7.9	3.8	2.7	4.5	2.9	2.4
45-49	(3.4)	(4.5)	2.4	(8.0)	4.3	2.8
50-54	(13.3)	(12.8)	6.1	(26.5)	(11.5)	7.3
55-59	(0.0)	(3.7)	(6.9)	(11.1)	(10.3)	(9.7)
Probability of dying						
Afghanistan						
15-49 ($_{35}q_{15}$)	103	86	52	118	75	71
15-59 ($_{45}q_{15}$)	160	159	112	269	170	147
Afghanistan (excluding the South zone)						
15-49 ($_{35}q_{15}$)	110	85	53	134	81	67
15-59 ($_{45}q_{15}$)	176	139	114	280	185	140

Note: A figure in parentheses indicates a less reliable estimate, with a relative error of 20 percent or more. The years 1996-2010 roughly corresponds to the years 1375-1389 in the Afghan calendar.

Figure 6.1 Adult Mortality Trends by Sex, for Three Five-Year Periods



Note: The years 1996-2010 roughly correspond to the years 1375-1389 in the Afghan calendar.

AMS 2010

6.1.2 Adult Mortality from Household Deaths

As part of the household interview, household respondents were asked about any usual residents of the household who have died in the five-year calendar period prior to the survey. Using the household listing of usual residents at the time of the survey, both numerators and denominators for mortality rates can be determined and the rates by sex and age can be calculated. Table 6.3 shows the age-specific mortality rates by sex for persons 15 years and over, their numerators and denominators, and the probabilities of dying between ages 15-49 years ($_{35}q_{15}$) and 15-59 years of age ($_{45}q_{15}$). The age-specific mortality rates are computed by dividing the number of deaths of former household members in the five years prior to the survey, in each age group, by the total person-months of exposure in that age group from the household member roster (the calculation of exposure assumes that on average a person lived 6 months into his/her declared age). The probability of dying for women and men in the reproductive age group from household death data is 86 per 1,000 and 90 per 1,000, respectively. The probability of dying among those age 15-59 is 151 per 1,000 for women and 161 per 1,000 for men. There is little difference in the probability of dying among both age groups of women if the South zone is excluded but the probability of dying during the reproductive age among men is noticeably lower when the South zone is excluded. For age groups 50-54 and 55-59, adult mortality estimates from reported household deaths are more reliable than estimates from the sibling history (i.e., no age-specific estimate has a relative error of 20 percent or higher). However, the average time period reported may be over- or under-estimated and so affect all the age-specific rates. Moreover, households that no longer exist due to mortality are also omitted as are the deaths in those households.

Table 6.3 Age-specific mortality rates (household deaths)

Age-specific mortality rates by sex for the five years preceding the survey, Afghanistan 2010

	Female			Male		
	Deaths	Exposure	Mortality rates (per 1,000)	Deaths	Exposure	Mortality rates (per 1,000)
Age group						
15-19	58	51,976	1.1	87	46,798	1.9
20-24	54	33,457	1.6	87	32,649	2.7
25-29	39	25,506	1.5	51	24,996	2.1
30-34	40	19,998	2.0	36	18,644	2.0
35-39	48	19,179	2.5	40	18,745	2.1
40-44	57	13,330	4.3	39	13,511	2.9
45-49	57	11,228	5.0	69	13,025	5.3
50-54	78	12,761	6.1	69	9,533	7.3
55-59	76	8,830	8.6	93	10,342	9.0
60-64	129	4,120	31.2	158	6,084	26.0
65-69	101	3,520	28.8	137	6,056	22.6
70-74	119	1,338	89.1	172	2,712	63.5
75-79	51	1,155	43.9	103	2,257	45.5
80+	126	759	166.5	196	1,382	142.1
Total	1,032	207,156		1,338	206,734	
Crude death rate for all ages			5.1			6.6
Probability of dying						
Afghanistan						
15-49 ($_{35}q_{15}$)			86			90
15-59 ($_{45}q_{15}$)			151			161
Afghanistan (excluding the South zone)						
15-49 ($_{35}q_{15}$)			87			83
15-59 ($_{45}q_{15}$)			154			159

Table 6.4 shows adult mortality rates, 15-59 ($_{45}q_{15}$), by geographical and socioeconomic characteristics for the period 0-4 years prior to the survey. Not surprisingly, the probability of dying among women in urban areas is lower than in rural areas. However, this is not the case among males, where there is no urban-rural difference (Figure 6.2). The Central zone has the highest mortality. The North zone shows the lowest mortality levels; The position of the South zone between the Central and North zones , may be attributed to the urban bias introduced from the exclusion of more than one-third of the rural areas in the South zone as discussed in Chapter 1. Correction for completeness and coverage in the South would likely push the mortality limits as high as or higher than the Central zone.

There is no clear pattern in mortality according to wealth status except for those in the wealthiest group, where mortality rates are lowest for both sexes. Mortality does not show a clear pattern by remoteness.

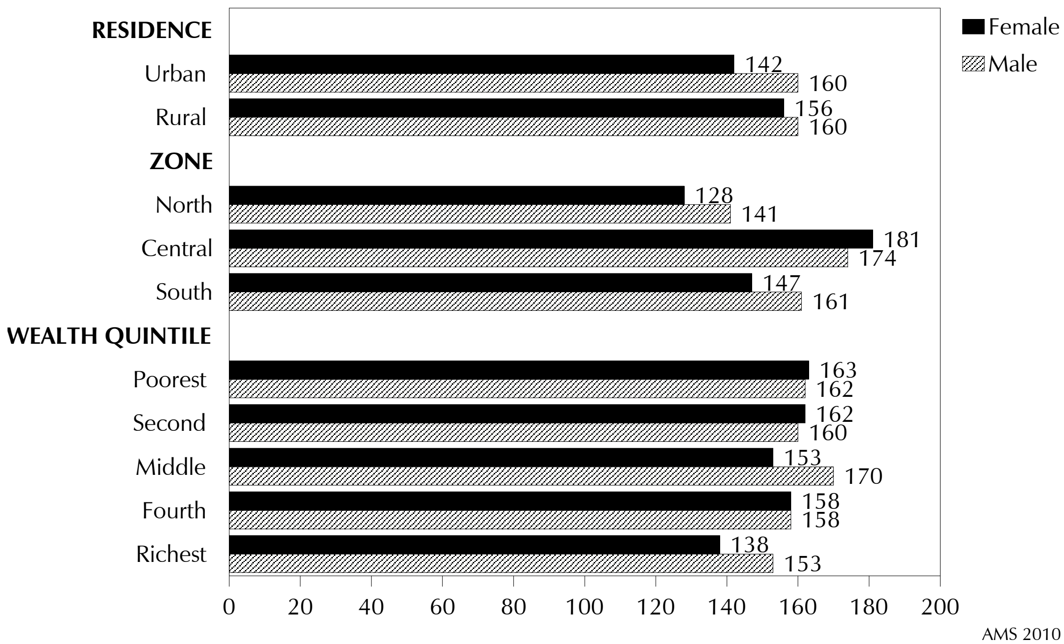
Table 6.4 Adult mortality by background characteristics (household deaths)

Adult mortality rates by background characteristics, based on household deaths for the period 0-4 years prior to the survey, Afghanistan 2010

Background characteristic	Probability of dying between age 15 and 59 ($_{45}q_{15}$) per 1,000	
	Female	Male
Residence		
Urban	142	160
Rural	156	160
Zone		
North	128	141
Central	181	174
South	147	161
Wealth quintile		
Poorest	163	162
Second	162	160
Middle	153	170
Fourth	158	158
Wealthiest	138	153
Remoteness quintile		
Most remote	154	132
Second	136	155
Middle	196	199
Fourth	144	166
Least remote	135	165
Total[a]	151	161

Note: A figure in parentheses indicates a less reliable estimate, with a relative error of 20 percent or more.
[a] Adjusted for age distribution of the respondent

Figure 6.2 Probability of Dying Age 15-59 by Residence, Zone, and Wealth Quintile, from Household Deaths in the 5 Years Prior to the Survey



6.2 Indirect Adult Mortality Estimates (Orphanhood Method)

This section presents indirect adult mortality estimates from the orphanhood approach, also called the parental survivorship approach. This is an indirect method that was conceived and first put into practice in the 1960s and 1970s (Henri, 1960; Brass and Hill, 1973). Since then, further work has been done on developing techniques for converting observed data on parental survival into standard life table probabilities of survival and adult mortality (e.g., Hill and Trussell, 1977; Blacker, 1977; Timaeus, 1992). During data collection, the method involved recording information in the household roster from two simple questions on whether the household member's biological mother and father was alive: "Is your (biological) mother still alive?" and "Is your (biological) father still alive?" The proportion of mothers (or fathers) surviving among respondents of a given age then represents an average of survival probabilities from the mother's age at the birth (or father's age at the conception) to the age of the respondents.1

The orphanhood approach produces long-term adult mortality estimates that extend back 20 years or longer, and helps to fill gaps in data during this period. The method is not reliable for short-term changes in mortality, so estimates are best used in tandem with direct methods that measure recent

[1] The orphanhood method of estimating adult mortality has several caveats. Reports are from surviving children: if children's survival and parents' survival are linked, there will be a bias in the mortality estimate. Similarly, there can be multiple reports of the same parent if there are multiple surviving siblings. The indirect method requires knowledge of fertility patterns in the past, in particular the mean age at birth for each sex of parent. If there has been a change in fertility, the estimates will be biased. The estimates produced are ambiguous as to time since each age group gives a separate section of the survival curve for separate central ages. Mortality levels that have changed over time, and especially if the change is not linear, result in biased estimates of mortality in recent periods. Errors in age reporting that distort the five-year age distributions of household members also distort the resulting survival curves and estimates of mortality. As with other indirect methods, the level of mortality is made with reference to a model life table. To the extent that the age pattern of mortality in the country does not follow that of the selected life table, the estimates of mortality may err.

mortality levels. The procedures used to assess the orphanhood data are described in detail in the United Nations Methods for Estimating Adult Mortality (UN, 2002) and the Manual X Indirect Techniques for Demographic Estimation (UN, 1983).

The basic data and the results of the indirect estimates using the orphanhood (parental survival) method are given in Table 6.5. The dates of the estimates range from 1992 to 2005 for women and 1996 and 2005 for men. Because men have older ages at birth than do women, estimates cannot be reliably calculated based on the survival of fathers of persons age 40 and over.

Table 6.5 Indirect estimation of adult mortality

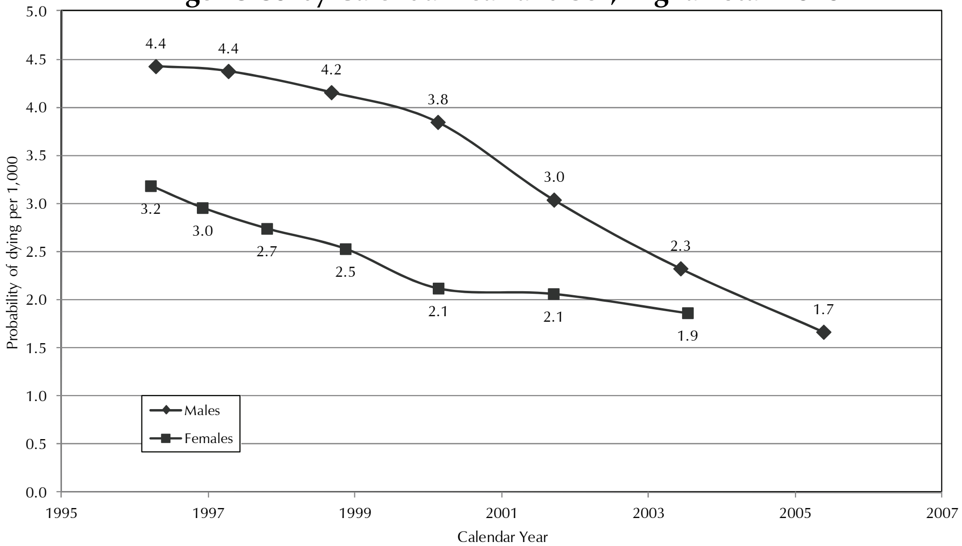
Basic data and estimates of adult female and adult male mortality rates and life expectancy at age 5 years using the indirect orphanhood method, Afghanistan 2010

	Survival and mortality estimates							
	Parent				Probability of dying			Life expectancy
Age group	Alive	Dead	Proportion alive	Date of estimate	30 - 59 ($_{35}q_{30}$)	15 - 59 ($_{45}q_{15}$)	15 - 49 ($_{35}q_{15}$)	at age 5 years (e_5)
FEMALE								
5-9	28,961	388	0.9868	2005.7	0.143	0.112	0.061	69.9
10-14	25,494	754	0.9713	2003.5	0.168	0.133	0.073	68.5
15-19	21,182	1,136	0.9491	2001.7	0.186	0.148	0.082	67.5
20-24	14,584	1,239	0.9217	2000.1	0.191	0.152	0.085	67.2
25-29	10,215	1,609	0.8639	1998.9	0.228	0.184	0.104	65.2
30-34	6,732	1,790	0.7900	1997.8	0.247	0.201	0.115	64.3
35-39	5,456	2,516	0.6844	1996.9	0.266	0.219	0.126	63.3
40-44	3,611	3,021	0.5445	1996.2	0.287	0.238	0.139	62.3
45-49	2,177	3,235	0.4023	1992.5	0.287	0.238	0.139	62.3
MALE								
5-9	30,008	394	0.9870	2005.4	0.150	0.118	0.064	69.5
10-14	26,167	818	0.9697	2003.4	0.210	0.168	0.094	66.2
15-19	24,619	1,712	0.9350	2001.7	0.274	0.226	0.131	62.9
20-24	18,038	2,424	0.8815	2000.1	0.346	0.294	0.177	59.4
25-29	11,361	2,839	0.8001	1998.7	0.374	0.322	0.197	58.0
30-34	7,089	3,410	0.6752	1997.3	0.394	0.342	0.211	57.0
35-39	4,383	3,540	0.5532	1996.3	0.399	0.346	0.215	56.8
40-44	3,252	4,616	0.4133	na	na	na	na	na
45-49	1,598	3,815	0.2953	na	na	na	na	na

na = Not applicable
Note: The mean age at birth used in the mortality estimates is 28.1 calculated from Table 3.1. Levels of estimates are based on coefficients in Timaeus, 1992: pages 47-63, Table 2. Dating of estimates are based on **Inited Nations, 1983:** page 104, Table 88.

Figure 6.3 presents results of the indirect assessment of the parental survival data based on survival between age 15 and age 59 for both men and women. Though dates are imprecise with the orphanhood estimates, the figure shows rapidly declining mortality for both sexes since about the year 1998 (circa 1377). The rapidity of the decline was greater between 1996 and 2000 (1375 and 1379 in the Afghan calendar) for women and between 2000 and 2006 (1379 and 1385 in the Afghan calendar) for men. Due to the nature of the method no estimates of mortality level are available beyond 2006 (1385 in the Afghan calendar).

Figure 6.3 **Indirect Orphanhood-based Estimates of Adult Mortality Age 15-59 by Calendar Year and Sex, Afghanistan 2010**



Note: The years 1995-2007 roughly correspond to the years 1374-1386 in the Afghan calendar.

6.3 LIFE TABLES AND LIFE EXPECTANCY

A life table simulates the lifetime mortality experience of a population by taking that population's current age-specific death rates and applying them to a hypothetical population of 100,000 people born at the same period of time (a synthetic cohort). For each age group in the life table, deaths reduce the number of the hypothetical population until, in the last age group (80 years and more), all of the people die.

Table 6.6 is a life table derived from the observed mortality experience in the AMS 2010 for the five years prior to the survey. The columns on the left, including person-years and the number of deaths, contain information from the household death roster and the member roster and are used to produce the death rate at an interval of age, (denoted as ${}_nM_x$, where x is the beginning age of the age interval and n is the width of the interval). The columns to the right are: the probability of dying in the age group of the persons who survive to the beginning age of each age interval (denoted as ${}_nq_x$); l_x, the number of people surviving to the beginning of each age interval, starting with 100,000 at birth; ${}_nd_x$, the number that die within each age interval; ${}_nL_x$, the total number of person-years lived within each age interval; and T_x, the total number of years of life to be shared by the population in the age interval beginning with age x and in all subsequent intervals. This measure takes into account the frequency of deaths that occur in this and all subsequent intervals. As age increases and the population of the cohort shrinks, the total person-years that the survivors have to live diminishes.

An informative summary output from the life table is the last column, e_x, which is life expectancy from age x. Life expectancy is the average number of years remaining for a person to live, at the beginning age of the given age interval. Life expectancy at birth (denoted e_0) summarizes the mortality at all ages and is often taken as a measure of the overall quality of life. Table 6.6 shows that the life expectancy at birth in Afghanistan for girls and boys born during the five years prior to the survey, is approximately 64 years. Note that due to high neonatal mortality rates, life expectancy at one year of age (e_1) is higher than life expectancy at birth. This increase is very common since most deaths under age one occur in the early and late neonatal periods.

Table 6.6 Female and male life table (household deaths)

Abridged female and male life tables for the five-year period prior to the survey, Afghanistan 2010

Age group and probability of dying	Person years	Number of deaths	Death rate ($_nM_x$)	Probability of dying ($_nq_x$)	Number of survivors (l_x)	Number of deaths in the age interval ($_nd_x$)	Person years lived in the age interval ($_nL_x$)	Total number of person years (T_x)	Life expectancy (e_x)
	Life table								
FEMALE									
Age group									
<1	11,226	696	0.06196	0.05910	100,000	5,910	95,721	6,422,580	64.2
1-4	47,278	232	0.00490	0.01936	94,090	1,822	371,493	6,326,859	67.2
5-9	75,884	63	0.00084	0.00417	92,268	385	460,255	5,955,366	64.5
10-14	62,849	40	0.00064	0.00317	91,883	291	459,162	5,495,112	59.8
15-19	51,976	58	0.00111	0.00552	91,592	506	457,170	5,035,949	55.0
20-24	33,457	54	0.00163	0.00811	91,086	739	453,304	4,578,779	50.3
25-29	25,506	39	0.00153	0.00762	90,347	689	450,370	4,125,476	45.7
30-34	19,998	40	0.00199	0.00991	89,658	889	446,424	3,675,106	41.0
35-39	19,179	48	0.00250	0.01245	88,769	1,105	442,703	3,228,681	36.4
40-44	13,330	57	0.00425	0.02104	87,665	1,844	434,060	2,785,978	31.8
45-49	11,228	57	0.00504	0.02490	85,820	2,137	424,299	2,351,918	27.4
50-54	12,761	78	0.00614	0.03025	83,683	2,532	413,748	1,927,618	23.0
55-59	8,830	76	0.00857	0.04199	81,151	3,408	416,239	1,513,870	18.7
60-64	4,120	129	0.03123	0.14524	77,744	11,292	352,276	1,097,631	14.1
65-69	3,520	101	0.02879	0.13464	66,452	8,947	338,408	745,355	11.2
70-74	1,338	119	0.08907	0.36691	57,505	21,099	195,706	406,947	7.1
75-79	1,155	51	0.04390	0.19857	36,406	7,229	217,319	211,241	5.8
80+	759	126	0.16649	1.00000	29,177	29,177	175,249	(6,078)	(0.2)
Probability of dying									
15-49 ($_{35}q_{15}$)				0.08635					
15-59 ($_{45}q_{15}$)				0.15119					
MALE									
Age group									
<1	12,664	932	0.07359	0.06960	100,000	6,960	94,961	6,357,553	63.6
1-4	53,894	280	0.00520	0.02053	93,040	1,910	367,083	6,262,591	67.3
5-9	86,211	122	0.00142	0.00706	91,130	644	453,846	5,895,508	64.7
10-14	59,113	81	0.00137	0.00680	90,486	616	451,308	5,441,662	60.1
15-19	46,798	87	0.00186	0.00927	89,871	833	447,977	4,990,354	55.5
20-24	32,649	87	0.00268	0.01330	89,038	1,185	441,263	4,542,376	51.0
25-29	24,996	51	0.00205	0.01021	87,853	897	436,702	4,101,114	46.7
30-34	18,644	36	0.00195	0.00970	86,956	844	432,672	3,664,411	42.1
35-39	18,745	40	0.00213	0.01061	86,112	914	428,826	3,231,740	37.5
40-44	13,511	39	0.00286	0.01420	85,198	1,210	425,206	2,802,914	32.9
45-49	13,025	69	0.00532	0.02626	83,989	2,205	415,746	2,377,708	28.3
50-54	9,533	69	0.00725	0.03564	81,784	2,914	402,395	1,961,963	24.0
55-59	10,342	93	0.00897	0.04390	78,869	3,462	399,395	1,559,568	19.8
60-64	6,084	158	0.02602	0.12244	75,407	9,233	346,664	1,160,173	15.4
65-69	6,056	137	0.02258	0.10709	66,174	7,086	334,675	813,510	12.3
70-74	2,712	172	0.06352	0.27560	59,088	16,285	232,573	478,834	8.1
75-79	2,257	103	0.04550	0.20511	42,803	8,780	253,349	246,261	5.8
80+	1,382	196	0.14212	1.00000	34,024	34,024	239,408	(7,088)	(0.2)
Probability of dying									
15-49 ($_{35}q_{15}$)				0.08998					
15-59 ($_{45}q_{15}$)				0.16094					

Note: A figure in parentheses indicates a less reliable estimate, with a relative error of 20 percent or more.

6.4 QUALITY OF THE ESTIMATES OF ADULT MORTALITY

There are three distinct sources of information in the AMS 2010 for estimating adult mortality levels: reporting of siblings' survival by women eligible for the individual interview, reporting of household members who died by a household respondent, and reporting of the survival of parents of current household members by the household respondent. Each of these sources is subject to misreporting. The quality of the information obtained by each type of source is examined and the mortality estimates produced by the results are compared with one another and with external estimates for Afghanistan and for nearby countries.

6.4.1 Sibling History Reporting

A check on the quality of the reporting in the sibling history can be made by calculating the mean sibship size and sex ratio at birth of siblings according to the date of birth of the respondent. It is expected that if fertility was high and constant in the past, the reported mean number of siblings would also be high and constant. The sex ratios at birth of the siblings should be in the normal range of 103 to 107 males per 100 females, assuming no sex-selective abortions. The top panel of Table 6.7 indicates a rising mean sibship size as the date of the respondent's year of birth increases (decreasing age), indicating rising fertility in the past. The sex ratios at birth are in general too high, especially for the South zone, indicting an omission of female siblings. Both the mean sibship size and the sex ratios at birth are higher for respondents born between 1986 and 1995 (1365 and 1374 in the Afghan calendar), that is, roughly 15-24 years of age. This pattern indicates an omission of sisters among the younger respondents and an omission of both sexes of siblings among the older respondents.

When mortality rates are high as is thought to be the case in the past for Afghanistan, much of the mortality takes place among children, especially those of a very young age, and may be omitted by respondents if these deaths occurred before the respondent was born or of an age to be told of the death. Consequently, to examine if this is the case for the AMS 2010, mean sibship size and sex ratio at birth were calculated for siblings who survived to at least age 12 years, shown in the second panel of Table 6.7. After 12 years of age, the mean number of siblings decreases somewhat with decreasing age, indicating that indeed the deaths omitted were mostly when the siblings were children. The sex ratios at birth decrease and then increase again but only approach the normal range for respondents outside the South zone born between 1976 and 1985 (1355 and 1364 in the Afghan calendar), indicating that there is still some omission of women in the sibling history, especially in the South zone. For Afghanistan excluding the South zone, the level of sex-selective omission is relatively minor.

The third panel of Table 6.7 shows the non-survivors to age 12. The increase in number of siblings who did not reach age 12 among younger respondents indicates omission of deaths to children, true in all domains but especially in the South. The sex ratios of the South are too high, indicating additional omission of girls under age 12 who died.

Table 6.7 Mean sibship size and sex ratio at birth of siblings

Mean sibship size and sex ratio at birth of siblings for all ages, for survivors to age 12 years and for non-survivors to age 12 years, for Afghanistan, Afghanistan excluding the South zone and South zone, Afghanistan 2010

Respondent's year of birth	Afghanistan		Afghanistan (excluding South zone)		South zone	
	Mean sibship size[1]	Sex ratio at birth	Mean sibship size[1]	Sex ratio at birth	Mean sibship size[1]	Sex ratio at birth
ALL AGES						
<1966	6.1	120.7	6.1	114.1	6.1	133.3
1966-70	6.3	114.7	6.4	110.6	6.0	124.9
1971-75	6.4	113.9	6.7	108.8	6.0	126.4
1976-80	6.6	111.1	6.7	106.8	6.3	121.2
1981-85	6.8	112.1	7.0	107.6	6.4	122.5
1986-90	7.0	114.2	7.2	109.7	6.7	124.6
1991-95	7.4	117.9	7.5	111.7	7.1	131.2
Total	6.9	115.1	7.0	109.9	6.6	126.8
SURVIVORS TO AGE 12 YEARS						
<1966	5.6	120.5	5.5	113.0	5.9	133.5
1966-70	5.7	114.4	5.7	109.6	5.9	124.8
1971-75	5.9	114.4	6.0	109.4	5.8	125.3
1976-80	6.0	110.1	6.0	105.3	6.1	120.3
1981-85	6.0	111.9	6.0	106.9	5.9	122.6
1986-90	5.7	113.8	5.7	110.1	5.7	121.3
1991-95	5.0	114.9	5.0	112.7	4.9	119.1
Total	5.6	113.9	5.6	109.6	5.6	122.5
NON-SURVIVORS TO AGE 12 YEARS						
<1966	0.5	122.5	0.6	122.0	0.2	126.4
1966-70	0.5	117.9	0.7	117.0	0.1	129.0
1971-75	0.5	110.0	0.7	104.7	0.2	157.7
1976-80	0.6	120.7	0.7	117.4	0.2	144.0
1981-85	0.8	113.6	1.0	111.6	0.5	122.2
1986-90	1.3	115.9	1.5	108.4	0.9	143.2
1991-95	2.4	123.0	2.5	110.1	2.2	155.9
Total	1.3	119.6	1.4	110.6	1.0	149.4

Note: The years 1966-2000 correspond roughly to the years 1345-1375 in the Afghan calendar.
[1] Includes respondent

By comparing the sex ratios of exposure to mortality from the sibling history of a well-reported survey, the proportion of missing sisters can be estimated, relative to that of brothers. The sex ratios of siblings from the AMS 2010 are too high for all zones and especially in the South zone. For all Afghanistan about 12 percent of sisters born 15 to 50 years prior to the survey appear to be missing, 7 percent for Afghanistan without the South zone and 21 percent in the South zone.

The sex ratio of mortality rates can be used to evaluate the reasonableness of the estimates. In Table 6.8, the sex ratio of the mortality rates in Afghanistan are compared with that of the United Nations Model Life Tables for South Asia with a life expectancy at birth of 64 years (United Nations, 1982). In this table there are two columns for AMS 2010 results, total and non-pregnancy related. The total column includes all deaths and the non-pregnancy related column excludes deaths during pregnancy, delivery, and puerperium. For the probability of dying between 15-49 years (${}_{35}q_{15}$), Afghanistan excluding the South zone is approximately the same as the model life table for all deaths. For mortality between 15-59 years (${}_{45}q_{15}$) and for non-pregnancy-related deaths, sex ratios are higher than the model life tables, indicating that there was omission of female deaths in the South zone and to a greater extent of non-pregnancy-related deaths in all zones.

Table 6.8 Sex ratios of the probability of dying						
Sex ratios of women's and men's mortality probabilities from 0-6 years prior to survey from sibling history compared with U.N. South Asia model life tables (e_0 = 64), Afghanistan 2010						
	Sex ratio of the probability of dying between exact ages					
	All deaths		Non-pregnancy-related deaths		U.N. Life Table	
	15-49	15-59	15-49	15-59	15-49	15-59
	($_{35}q_{15}$)	($_{45}q_{15}$)	($_{35}q_{15}$)	($_{45}q_{15}$)	($_{35}q_{15}$)	($_{45}q_{15}$)
Afghanistan	114	127	185	156	107	116
Afghanistan (excluding the South zone)	108	127	168	155	107	116
South zone	124	121	218	151	107	116

In interpreting differences in the rates, it is also important to consider the impact of sampling variability. Table 6.9 shows the confidence intervals of the probabilities of dying between 15-49 years and 15-59 years of age for all female deaths, and for non-pregnancy related female and male deaths. The table indicates that there is no significant difference between the probabilities of dying by zone. There is also no significant difference between the probabilities of dying as calculated from the sibling history and the household death roster between 15-59 years since the probabilities of dying from Table 6.3 are within the confidence intervals shown in this table.

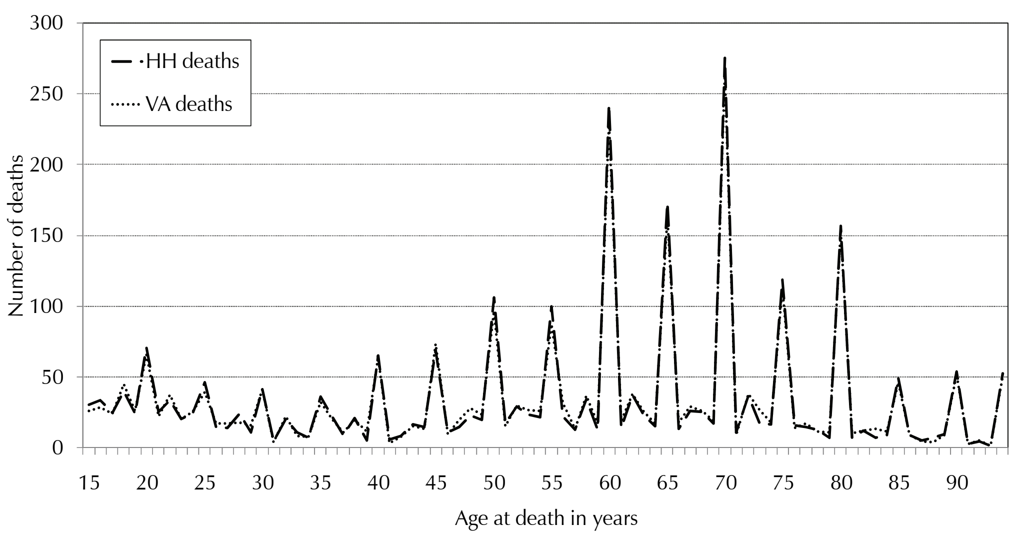
Table 6.9 Probabilities of mortality and confidence intervals				
Women's and men's probabilities of mortality per 1,000 and 95 percent confidence intervals for 0-6 years prior to survey from sibling history, Afghanistan 2010				
	$_{35}q_{15}$		$_{45}q_{15}$	
	Probability of mortality	Confidence interval	Probability of mortality	Confidence interval
WOMEN				
Afghanistan	63	54-71	125	95-155
Afghanistan (excluding the South Zone)	62	51-73	122	86-157
South zone	64	48-80	134	76-193
WOMEN NON-PREGNANCY RELATED				
Afghanistan	39	33-45	103	73-133
Afghanistan (excluding the South Zone)	40	33-48	101	66-136
South zone	37	25-49	108	50-167
MEN				
Afghanistan	71	63-79	156	132-181
Afghanistan (excluding the South Zone)	67	58-75	153	123-183
South zone	79	63-96	160	118-202

6.4.2 Household Reporting

In the Household Questionnaire, one adult member was charged with reporting on all usual household members and others who were currently in the household (visitors). The household respondent may or may not have had assistance from other persons present during the interview. The numerator of mortality rates calculated from the Household Questionnaire is based on questions asked about deaths in the five years before the survey, that is, since 21 March 2005 (1 Hammal 1384 in the Afghan calendar) to usual residents of the household. The sex and age at death was recorded for all deaths. For each death, a verbal autopsy form was applied, collecting information on the date of birth and date of death of the deceased. Different forms were used for neonates (age at death up to 28 days), children age one month to eleven years, and adults age 12 years and older. The denominator for the household-based mortality rates consists of the number of person-years of exposure to dying in the five years preceding the date of interview.

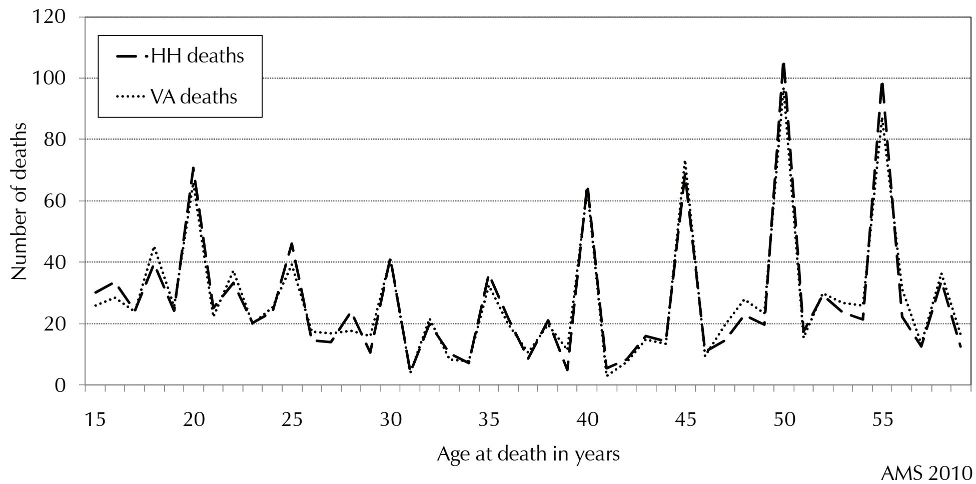
A number of factors influence the quality of the adult mortality data, including heaping of ages at death, transference of the date of death, and underreporting of deaths. With reference to heaping, Figure 6.4 shows the distribution by age at death of adults as directly reported from the household respondent and as calculated from the verbal autopsy using information on the birth and death dates of deceased persons. It is evident from this figure that age at death is quite heaped from both sources of data. As Figure 6.5 shows, even with limiting the age range to between 15-59 years, there is still a substantial amount of digit preference for ages ending in zero and five. Except for 28 years of age, there is little difference between the distributions from the direct report on age at death and that calculated by the difference between the date of death and the date of birth. Figure 6.6 shows that preference for ages ending in zero and five is not limited to the South zone alone.

Figure 6.4 **Age Distribution of Deaths at Ages 15 and Over Reported in the Household Questionnaire and in the Verbal Autopsy, Afghanistan 2010**



AMS 2010

Figure 6.5 **Age Distribution of Deaths at Ages 15-59 Reported in the Household Questionnaire and in the Verbal Autopsy, Afghanistan 2010**



AMS 2010

Figure 6.6 **Age Distribution of Deaths at Ages 15-59 Reported in the Household Questionnaire and in the Verbal Autopsy, Afghanistan 2010 Excluding South Zone**

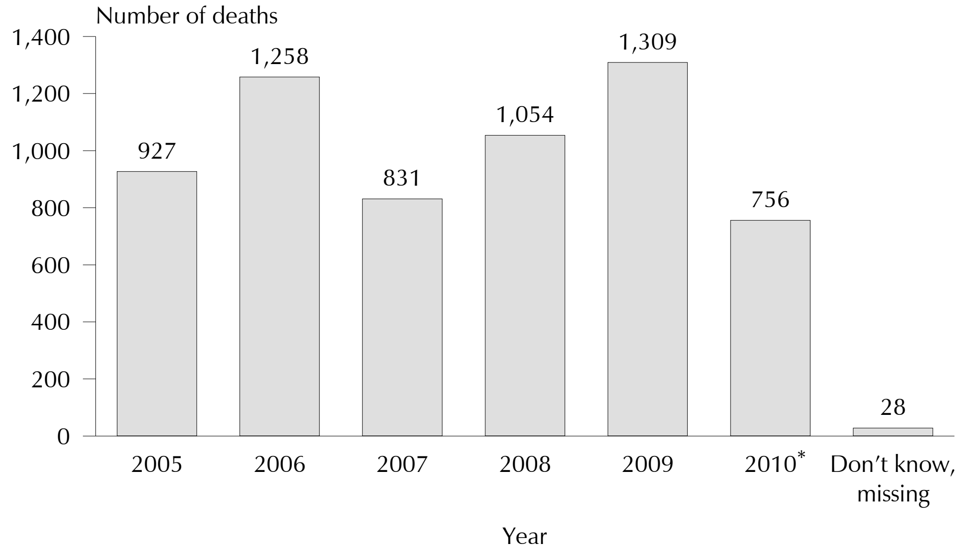
AMS 2010

The denominators for the household-based mortality rates are amounts of exposure derived from the household members' age distributions. They have been shown above to be subject to digit preference as well, especially in the adult ages.

Figure 6.7 indicates that there may have been some transference of the date at death in order to avoid the detailed questioning in the Verbal Autopsy Questionnaire. This transference is suspected because the number of deaths for year 2006 (1385 in the Afghan calendar) is substantially higher than that in year 2007 (1386 in the Afghan calendar), the beginning year when the details about the deaths are obtained. Note, however, that such transference does not affect the level of mortality calculated for the period 0-4 years prior to the survey. The low number for year 2010 (1389 in Afghan calendar) is due to the fact that it is not a complete year since the interviews took place then.

The unexpectedly low crude death rates, on the order of 5 and 7 per 1,000, suggest that there may still be some level of underreporting of deaths in the household (Table 6.3). Despite this low rate, the level of adult mortality computed from household information is higher than that from the sibling history by about one-fourth for women and one-tenth for men.

Figure 6.7 **Number of Deaths from Verbal Autopsies by Calendar Year, Afghanistan 2010**



Note: The years 2005-2010 roughly corresponds to 1384-1389 in the Afghan calendar.
* Indicates incomplete year

AMS 2010

Table 6.10 Completeness of household death reporting

Estimated percentage of completeness of reported household deaths for age 5 and above in the 0-4 years preceding the survey, Afghanistan 2010

	Central	North	South	Total
Male	119	125	75	105
Female	82	63	49	66

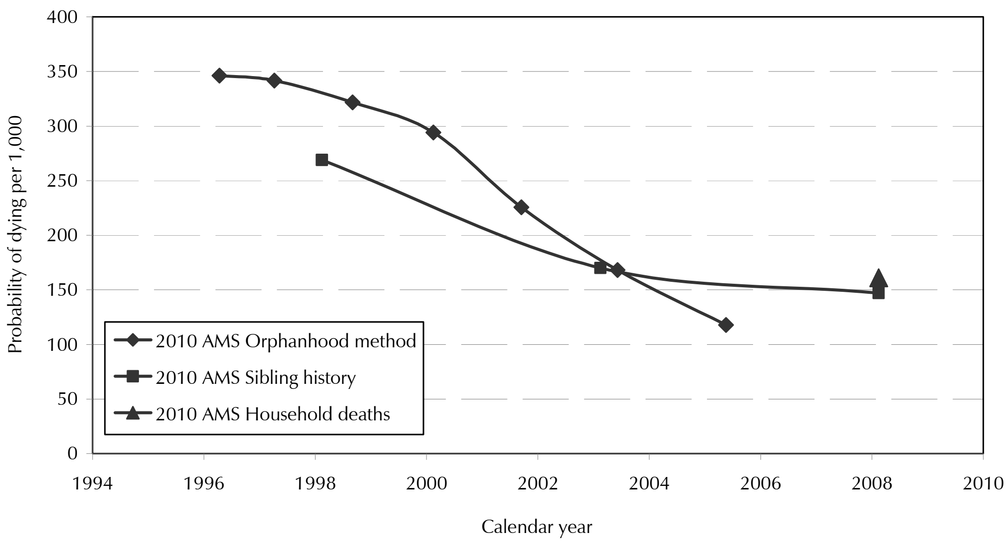
Despite the higher estimates from the household source compared with the sibling history, there is still underreporting of deaths in the household. This is due in part to recall bias that occurs in any retrospective survey. However, there may also be other factors at work that prevented complete reporting, especially in the South zone. Table 6.10 shows results of a preliminary assessment of the completeness of reporting of household deaths for age 5 and above in the 0-4 years prior to the survey, using the Brass Growth Balance Method (see for example, Brass, 1975; Bennett and Horiuchi, 1984; Hill, 1987).[2] First, the completeness of reporting of female deaths is consistently lower than that of male deaths; and second, the completeness of reporting is lowest in the South zone for both sexes compared with other zones. For males in the Central and North zones, more deaths than expected are reported, resulting in over 100 percent completeness perhaps because household members reported on deaths that occurred outside the reference period. However, this method assumes a population with no migration and with constant fertility and mortality rates, which is not the case in Afghanistan. It is important not to attribute what might be real changes in the population structure to undercounting and overcounting of deaths.

[2] The Brass Growth Balance Analysis is a death distribution method for estimating the percentage of deaths that are registered relative to the household population distribution. In this assessment, for each age group the exposure time from the household and the deaths in the past five years were used to compute partial birth rates and partial death rates. These were plotted and the slope of the fitted line indicates the proportion of deaths relative to the population.

6.4.3 Internal and External Comparison of Adult Mortality Rates

Comparison between the various mortality rates between ages 15-59 from the sibling history, the household death roster, and the indirect orphanhood method are shown in Figures 6.8.1 for men and 6.8.2 for women, respectively. Both the male and female mortality rates are somewhat consistent in the figures. A preliminary conclusion that may be drawn from these results is that, for both sexes, there is good internal consistency among the estimates from the various AMS 2010 sources in more recent years. For men, there is a divergence in the trends indicated by indirect orphanhood levels and the direct sibling mortality levels such that there is a much stronger decline in the former; however, the rates are about the same around 2003 and 2004 (1382 and 1383 in the Afghan calendar). For women the estimates compare well in the mid-2000s. If indirect orphanhood estimates were extrapolated to more recent years, it appears that they would be lower than the 2008 (circa 1387) direct estimate from household deaths and from the sibling history.

Figure 6.8.1 **Estimates of Male Adult Mortality Between Ages 15 and 59 from the Various Sources in the Survey, Afghanistan 2010**

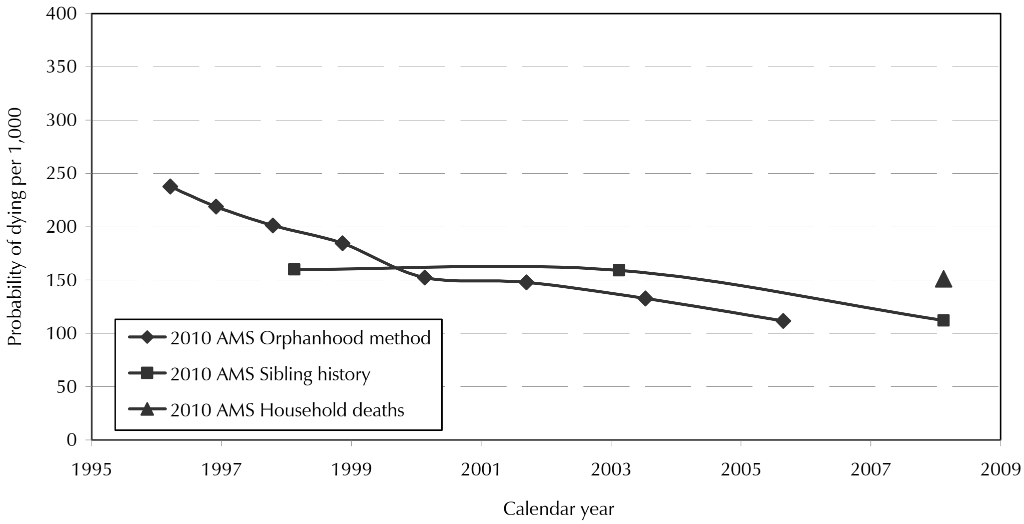


Note: The years 1994-2010 corresponds roughly to the years 1373-1389 in the Afghan calendar.

AMS

Internal consistency of estimates between sources, however, does not necessarily represent robust measures of adult mortality. The challenging question that remains, therefore, is to investigate further why levels of recent mortality from all three sources—indirect, sibling, and household death—are lower than estimates for neighboring countries, including Pakistan, Bangladesh, and India (see next section). Preliminary evidence on data quality points to substantial underreporting of deaths to females, generally in the South zone. Although further analysis is beyond the scope of the present report, a closer examination is necessary to quantify the potential effects of skewed sex ratios, low completeness of reported deaths, and lack of coverage of adult mortality in the rural areas of the South zone.

Figure 6.8.2 Estimates of Female Adult Mortality Between Ages 15 and 59 from the Various Sources in the Survey, Afghanistan 2010

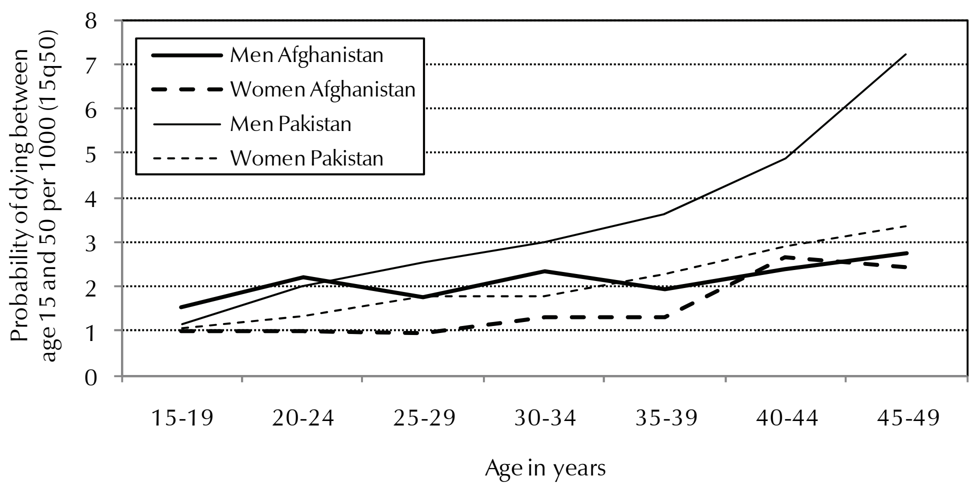


Note: The years 1995-2009 correspond roughly to the years 1374-1388 in the Afghan calendar.

AMS 2010

Figure 6.9 compares the AMS 2010 age-specific probabilities of dying for men and women with those of the 2006 Pakistan DHS. The probabilities for both men and women from the AMS 2010 are below those for Pakistan, especially after 30 years of age. Excluding the South zone does not change this result (not shown).

Figure 6.9 Adult Mortality Probabilities by Age and Sex, Afghanistan 2010 and Pakistan 2006



AMS 2010

Comparable adult mortality estimates from sibling history sources do not exist for other countries in the region. Estimates of reproductive age mortality elsewhere in the region, however, are generally higher than in Afghanistan. For example, the 2001 Bangladesh Maternal Health Services and Maternal Mortality Survey reports reproductive-age mortality rates (${}_{35}q_{15}$) from the sibling history to be about 73 per 1,000 for both men and women, for a period about three years prior to the survey (1998-2001) (NIPORT et al., 2003).[3] In Nepal, measures of reproductive age mortality from sibling history information for the 7 years prior to the survey (1999-2005) show the probability of dying, for women and men, to be 99 and 127, respectively (MOHP, New ERA and MI, 2007 as calculated from Table 9.1).

Table 6.11 presents various estimates of life expectancy at birth from household deaths in the five years preceding the survey for Afghanistan as a whole, Afghanistan excluding the South zone, and the South zone. The estimates are based on reported deaths, adjusted under-5 mortality rates and potential undercounting of deaths. For each variation, the life expectancies are given without and with adjustment of person-years of exposure for changes in household composition (movement of people in and out of the household, including births and deaths) in the five years preceding the survey. In the first panel, the life expectancies are based on deaths reported in the household death roster. For Afghanistan without adjustment for migration, the life expectancy at birth is 64.2 years for females and 63.6 years for males. Adjusting for changes in composition lowers the life expectancy by 0.4 years for females and 0.2 years for males. The South zone has higher life expectancies than Afghanistan excluding the South zone by 3.5-3.7 years for women and 1.6-1.7 years for men.

Table 6.11 Various estimates of life expectancy at birth

Life expectancy at birth with and without taking changes in household composition into account for exposure, adjusting "Best" estimate of infant and child mortality, and for 25 percent excess South zone mortality, by sex, for Afghanistan, Afghanistan excluding the South zone, and the South zone, Afghanistan 2010

	All Afghanistan		Afghanistan excluding South zone		South zone	
	Female	Male	Female	Male	Female	Male
As reported						
Without change in household composition	64.2	63.6	63.2	62.9	66.7	64.5
With change in household composition	63.8	63.4	62.8	62.7	66.5	64.4
Adjusted for neonatal/postneonatal ratio[1]						
Without change in household composition	na	na	62.6	63.5	na	na
With change in household composition	na	na	62.2	63.4	na	na
Adjusted for +25 percent South zone						
Without change in household composition	62.2	61.7	na	na	na	na
With change in household composition	61.8	61.5	na	na	na	na
Adjusted for +25 percent South zone and neonatal/postneonatal ratio[1]						
Without change in household composition	61.5	61.7	na	na	na	na
With change in household composition	61.5	62.3	na	na	na	na

[1] Calculated using adjusted infant and 1-4 mortality rates from "Best" estimates from Technical Note on Infant and Child Mortality,Appendix D
na = Not applicable

In the second panel, the life expectancies at birth for Afghanistan excluding the South zone are adjusted by using the "Best" estimates of infant and child mortality. This adjustment reduces female life expectancy by 0.6 of a year, but increases male life expectancy by the same amount compared with that based on just the reported deaths.

[3] The Bangladesh ${}_{35}q_{15}$ rates are slightly higher when estimated from the household deaths, a similar phenomenon to the one in Afghanistan, as seen in the discussion of adult mortality from household deaths.

The third panel estimates life expectancy for all Afghanistan assuming that the mortality rates in the South zone are 25 percent higher than those in the rest of Afghanistan, lowering the life expectancy by about 2 years. However, there is no specific basis to this assumption.

The fourth panel combines the modifications done in panels two and three and results in life expectancies for all Afghanistan that are 2.3 to 2.7 years less than that reported for females and 1.1 to 1.9 years less for males. Therefore for all Afghanistan life expectancies could vary between 61.5-64.2 years for females and between 61.7-63.6 years for males, values which are far higher than from previously modeled estimates.

6.5 Conclusion

The levels of adult mortality are obtained using three different sources of information within the AMS 2010: a household roster of deaths during the preceding five years, deaths to siblings of respondents to the Woman's Questionnaire, and the survival at the time of the survey of parents of members of the household. All the estimates are in broad agreement with each other given the variation due to sampling error. The death roster gives values a little higher than the sibling history for the recent past, with a probability of dying of 86 per 1000 between ages 15-49 for women and 90 for men and between ages 15-59 years of 151 for women and 161 for men. Life table calculations of mortality give life expectancies of approximately 64 years for each sex.

However, there are indications that the mortality levels may be somewhat understated. The basic data show substantial digit preference for both numerators (deaths) and denominators (exposure). Sex ratios are too high for both sibling and death roster exposure and death rates. These problems are much more extensive in the South zone, probably due to security situations that inhibited full interviewing in certain locations and a desire by respondents to protect their families. The Brass Growth Balance method adds evidence to these conclusions as do comparisons with external sources. However, the omission of deaths and exposure tend to offset one another so that the effect on mortality rates is thereby reduced. It is certainly evident from the data that adult mortality levels have fallen substantially in the last decade and are below those of even the recent past. Estimates of life expectancies based on reported deaths, adjusted under-5 mortality rates and potential undercounting of deaths results in life expectancies for all Afghanistan that are 2.3 to 2.7 years less than that reported for females and 1.1 to 1.9 years less for males. Therefore, for all Afghanistan life expectancies could vary between 61.5-64.2 years for females and between 61.7-63.6 years for males.

MATERNAL MORTALITY 7

Following the launch of the Safe Motherhood Initiative in 1987, attention to reproductive health has increased worldwide, as has the need for reliable countrywide estimates of maternal deaths. According to the World Health Organization (WHO), a maternal death is defined as "the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes" (WHO, et al., 2010). However, accurate identification of the obstetrical causes of maternal deaths (excluding deaths due to accidental or incidental causes) is not always possible, especially in a developing country where the majority of deliveries take place at home or in a noninstitutional setting, and where civil registration systems with accurate attribution of cause of death are nonexistent or inadequate. As a result, the estimate of maternal mortality that is most commonly used in developing countries (*pregnancy-related mortality)* is based only on the timing of death relative to pregnancy. Pregnancy-related deaths are any deaths to women during pregnancy or within two months following the termination of the pregnancy, including deaths from accidental or incidental causes. The discussion on pregnancy-related deaths generally includes four measures: The *pregnancy-related mortality ratio*, which is the most common measure, is defined as the number of pregnancy-related deaths during a given time period per 100,000 live births during the same time period. The *pregnancy-related mortality rate* refers to the number of pregnancy-related deaths in a given time period per 1,000 woman-years of exposure during the same period. The probability of dying from a pregnancy-related cause during a woman's reproductive life is the *adult lifetime risk of pregnancy-related death*. The final measure is the proportion of all deaths of women that are pregnancy related (*proportion pregnancy related)*.

The Maternal Mortality Estimation Inter-agency Group (WHO, et al., 2010) estimated that 358,000 maternal deaths occurred worldwide in 2008. This is equivalent to one maternal death every one and a half minutes. Almost all of these deaths (99 percent) occur in developing countries. In fact, maternal mortality statistics reflect one of the largest disparities between developing and developed countries of any health indicator. One of every 120 women in developing countries dies from these complications, compared with 1 out of every 4,300 women in developed countries (WHO, et al., 2010). The risks of dying during pregnancy and childbirth are increased by women's lack of empowerment, education, and access to economic resources, as well as poor nutrition and a heavy physical workload during pregnancy. Most maternal deaths could be prevented by ensuring good quality maternal health services, such as antenatal and postnatal care, and skilled assistance during childbirth, including emergency obstetric care. Prevention of unwanted pregnancies and the provision of safe abortion services, as allowed by law, could reduce maternal deaths and injuries caused by unsafe abortions. High quality family planning services, counseling, and information could further reduce maternal deaths and injuries.

Maternal mortality in Afghanistan is thought to be among the highest in the world. However, there has never been a nationally representative survey of maternal mortality in the country. Previous estimates of maternal mortality have been based largely on a reproductive age mortality survey (RAMOS) conducted in 2002, with a nonrepresentative sample of 4 of the 360 districts in the country at that time (Bartlett, et al., 2005).[1] In the RAMOS, the maternal mortality ratio (MMR) in Afghanistan from 1999-2002 was estimated to be between 1,600 and 2,200 per 100,000 live births. The estimate assumed that provinces with similar population densities had maternal mortality ratios similar to those in the districts where data were collected. The risk of maternal death was considerably lower in urban areas and increased with remoteness in rural areas. The estimated lifetime risk of maternal death in Afghanistan was between one in six and one in nine. The survey also found that the most frequent cause of maternal mortality in the four districts was hemorrhage, followed by obstructed labor. Since the RAMOS was fielded, there have been several modeled estimates of maternal mortality in Afghanistan based largely on the findings from this single survey.

Given the length of time since the RAMOS study and the study's limitations, MoPH was interested in obtaining updated information on maternal mortality. Such data can be obtained through vital registration or longitudinal studies of pregnant women, as well as household surveys like the RAMOS. However, there is no national vital registration system in Afghanistan. The vital registration system, established by MoPH and the Ministry of the Interior, operates only in some maternity hospitals in Kabul province.

The AMS 2010 survey allows the calculation of pregnancy-related mortality and maternal mortality. Direct estimates of pregnancy-related mortality use data from a series of questions on the age of surviving sisters of survey respondents (from a sibling history), the age at death of sisters who have died, the number of years since the death of sisters, and whether the death was pregnancy related. In addition, information was collected on deaths in the household in the five years preceding the survey. A subset of all deaths in the three years preceding the survey was followed up with detailed questions on the cause of death (see Chapter 8). Information from the verbal autopsies is used to estimate maternal mortality rather than pregnancy-related deaths and to calculate an alternative measure of pregnancy-related mortality.

7.1 Data Quality Issues

It is possible to assess selected aspects of the quality of the pregnancy-related mortality data for Afghanistan by examining some of the data quality tables in Appendix C (Tables C.10-C.13). Table C.10 shows that the completeness of information on siblings that women reported on is excellent. The survival status of siblings was reported for 99.7 percent of sisters and 99.8 percent of brothers. There is almost complete reporting of the age of living siblings. Women were able to report the number of years since death for all of their siblings who died, but they were not able to report the age at death for 0.5 percent of their dead siblings.

The distribution of the respondents' year of birth in relation to the year of birth of their siblings is another crude measure of the quality of the sibling data. If there is no bias in reporting, the distribution of the year of birth of siblings should be roughly equivalent to the distribution of the year of birth of women

[1] These districts were: Kabul city, Kabul province; Alisheng district, Laghman province; Maywand district, Kandahar province; and Ragh district, Badakshan province. The districts were selected as a proxy for urban, semirural, rural and very rural parts of the country. All households in randomly selected villages in these four districts were surveyed and deaths among women of reproductive age were investigated through verbal-autopsy interviews with family members. Based on the findings of maternal deaths in these districts, the authors extrapolated the data to provide a national estimate of maternal mortality for the country.

overall. The median year of birth of respondents (1986, which is roughly equivalent to the year 1365 in the Afghan calendar) is the same as the median year of birth of their siblings, indicating that there is no perceptible bias in the years of birth of siblings (Table C.11).

A final measure of data quality is the mean number of siblings, or the mean sibship size. Sibship size is expected to stay fairly constant when fertility is not changing and to decline as fertility declines over time. Unexpectedly, sibship size in the AMS 2010 was found to increase over time as discussed in Chapter 6 (Table 6.7). This suggests that there may be omission in the reporting of siblings of older women. In addition, the particularly high sex ratios at birth for siblings of older women suggest that sisters are more likely to be underreported than brothers.

If the omission occurred only among sisters who died before age 12, the pregnancy-related mortality estimates would not be biased because information about deaths of women under 12 years of age is not used in the estimation of pregnancy-related mortality. When siblings under 12 years old are excluded (second panel of Table 6.7), the mean sibship size increased from 5.6 for women born before 1966 (1345 in the Afghan calendar) to 6.0 for women born in 1976-1985 and then declined steadily to a low of 5.0 for women born in 1991-1995 (1370-1374 in the Afghan calendar). The overall sex ratio at birth decreased from 115.1 to 113.9 when siblings under 12 years old were excluded, indicating that there is some underreporting of sisters that is likely to affect the pregnancy-related mortality estimates.

7.2 Pregnancy-Related Mortality Based on Information about Siblings

In the sibling history, female respondents were asked to list, in chronological order starting with the first born, all the brothers and sisters born to their natural mother. Information was then obtained on the survivorship of each of the siblings, the ages of surviving siblings, the year of death or years since death of deceased siblings, and the age at death of deceased siblings. For each sister who died at age 12 or later in life, the respondent was asked additional questions to determine whether the death was pregnancy related; that is (1) whether the sister was pregnant when she died; (2) if not, whether the sister died during childbirth; and (3) if not, whether the sister died within two months of the termination of a pregnancy or childbirth. Listing all siblings (female and male) in chronological order of their birth is believed to result in better reporting of events than would be the case if only information on sisters was obtained. Moreover, the information collected also allows direct estimates of adult male and female mortality.

To obtain the pregnancy-related mortality estimates from the sibling history data, age-specific mortality rates for sisters are calculated by dividing the number of deaths by the number of years of exposure. To remove the effect of truncation bias (caused by the fact that the upper boundary for eligibility in the AMS 2010 is 49 years), the overall rate for women age 15-49 is standardized by the age distribution of the survey respondents. Pregnancy-related deaths are defined as deaths that occurred during pregnancy, during childbirth, or within two months after the birth or termination of a pregnancy.

The sample for the AMS 2010 was designed to provide acceptable estimates of pregnancy-related mortality for the country as a whole, for urban and rural areas separately, and for three geographic zones—North, Central, and South. Nevertheless, because of the statistical rarity of the event, estimates of pregnancy-related mortality from the sibling history are subject to wide confidence intervals (CI) and have to be interpreted with caution.

The level of pregnancy-related mortality in Afghanistan in the seven years preceding the AMS 2010 is moderately high (Table 7.1). Respondents reported 256 pregnancy-related deaths in the seven years preceding the survey. The pregnancy-related mortality rate, which is the annual number of pregnancy-related deaths per 1,000 women-years of exposure, was 0.59, and pregnancy-related deaths accounted for 41 percent of all deaths to women age 15-49 in the seven years preceding the survey. In other words, about two in five deaths to women age 15-49 in the seven years preceding the survey were pregnancy related.

Table 7.1 shows that the pregnancy-related mortality rate increases steadily from age 15-19 to age 40-44 and then decreases at age 45-49. Because pregnancy-related deaths in each age group are a relatively rare occurrence, the age-specific pattern should be interpreted with caution.

Because women face a risk of pregnancy-related mortality for each of their births, it is possible to calculate the lifetime risk of pregnancy-related mortality based on the level of fertility in Afghanistan. This measure describes the cumulative loss of human life due to pregnancy-related death over the female life course. In the seven years preceding the survey, the lifetime risk of pregnancy-related mortality was 0.02 (or 2 percent). The data imply that about 1 in 50 women will die of pregnancy-related causes during their lifetime and that one Afghan woman dies about every 2 hours from pregnancy-related causes.

Table 7.1 Pregnancy-related mortality rates

Direct estimates of pregnancy-related mortality rates, from the sibling history, in the seven years preceding the survey, by age, Afghanistan 2010

Age	Total deaths	Pregnancy-related deaths	Sister exposure years	Pregnancy-related mortality rate[1]	Proportion of pregnancy-related deaths to all female deaths
15-19	123	39	110,187	0.358	32.2
20-24	118	55	98,458	0.557	46.7
25-29	95	49	81,164	0.607	51.8
30-34	93	39	61,521	0.627	41.7
35-39	69	31	43,903	0.711	45.5
40-44	80	30	25,599	1.184	38.0
45-49	44	12	13,713	0.907	28.0
Total	621	256	434,546	0.590	41.3
Total (excluding South zone)	433	167	293,792	0.570	38.7
General fertility ratio (GFR)	0.185[a]				
Pregnancy-related mortality ratio[2]	327 (CI: 260-394)				
Pregnancy-related mortality ratio[2] excluding South zone	315 (CI: 231-399)				
Lifetime risk of pregnancy-related death[3]	0.02				

CI: Confidence interval
[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 100,000 live births; calculated as the age-adjusted pregnancy-related mortality rate times 100 divided by the age-adjusted GFR
[3] Lifetime risk of pregnancy-related death per woman = $1-(1-\text{PRM ratio}/100{,}000)^{TFR}$ where TFR represents the total fertility rate for the seven-year period preceding the survey
[a] Age-adjusted rate based on age distribution of respondents to the Woman's Questionnaire

The pregnancy-related mortality ratio, which is obtained by dividing the age-standardized pregnancy-related mortality rate by the age-standardized general fertility rate, is often considered a more useful measure of pregnancy-related mortality because it measures the obstetric risk associated with each live birth. Table 7.1 shows that the pregnancy-related mortality ratio for Afghanistan is 327 deaths per 100,000 live births for the seven-year period before the survey. This estimate is equivalent to 3 deaths per 1,000 live births or 0.3 percent of all live births.

Because about one-third of the rural population in the South zone was not covered in the survey due to the security situation, there is a substantial urban bias in that zone. Therefore, the pregnancy-related mortality ratios are shown for Afghanistan excluding the South zone in addition to the national estimate. However, the pregnancy-related mortality ratio for all of Afghanistan (327) is only slightly higher than the pregnancy-related mortality ratio for Afghanistan excluding the South zone (315). The confidence interval for the pregnancy-related mortality ratio is 260-394 for Afghanistan and 231-399 for Afghanistan excluding the South zone.

Gakidou and King (2006) recommend an alternative approach to the calculation of mortality rates that takes into account possible variations in mortality rates with sibship size and also estimates the number of people who have died in families with no survivors. The pregnancy-related mortality ratio for the seven years preceding the AMS 2010, using these adjustments, is 372 per 100,000 births, which is 14 percent higher than the unadjusted estimate of 327. For Afghanistan excluding the South zone, the Gakidou-King pregnancy-related mortality ratio is 332, which is 5 percent higher than the unadjusted estimate of 315.

Table 7.2 shows estimates of pregnancy-related mortality rates and ratios for the seven years preceding the survey by urban-rural residence[2] and by zones. The pregnancy-related mortality ratio is more than four times as high in rural areas (417) as in urban areas (95). The urban-rural difference is highly statistically significant. The high pregnancy-related mortality in rural areas is particularly important because 79 percent of the country's population is rural. Table 7.2 also shows pregnancy-related mortality estimates for the three zones. Pregnancy-related mortality ratios range from a low of 285 deaths per 100,000 live births in the Central zone to 354 in the North zone and 356 in the South zone. However, because of the wide confidence intervals, it is not possible to say if there are real differences in pregnancy-related mortality by zone.

Table 7.2 Pregnancy-related mortality rates and ratios by residence and zone

Pregnancy-related mortality rates and ratios, from the sibling history by residence of siblings and zone in the seven years preceding the survey, Afghanistan 2010

Residence/zone	Pregnancy-related deaths	Sister exposure years	Pregnancy-related mortality rate[1]	General fertility rate[2]	Pregnancy-related mortality ratio[3]	Total fertility rate[4]	Lifetime risk of pregnancy-related deaths[5]
Residence of sibling							
Urban	22	126,156	0.173	0.166	95 (CI: 54-135)	5.3	0.005
Rural	234	308,390	0.760	0.190	417 (CI: 325-510)	6.2	0.026
Zone							
North	83	127,421	0.650	0.187	354 (CI: 227-481)	6.0	0.021
Central	85	166,371	0.508	0.179	285 (CI: 160-410)	5.7	0.016
South	89	140,754	0.631	0.189	356 (CI: 248-463)	6.5	0.023

CI: Confidence interval
1 Expressed per 1,000 woman-years of exposure
2 Age-adjusted rate based on age distribution of respondents to the Woman's Questionnaire
3 Expressed per 100,000 live births
4 Based on a seven-year period preceding the survey, so not comparable to data in Table 3.2
5 Lifetime risk of pregnancy-related death = $1-(1-\text{PRM Ratio}/100{,}000)^{TFR}$ where TFR represents the total fertility rate for the seven-year period preceding the survey

2 Urban-rural residence here refers to the usual place of residence of siblings, and not of the respondents, because the AMS 2010 included an additional question to determine if the sibling usually lived in an urban or rural area.

It is useful to compare the seven-year AMS 2010 estimate of the pregnancy-related mortality ratio with the most recent estimates of the pregnancy-related mortality ratio for other countries in the region that use a similar methodology. The pregnancy-related mortality ratio for Afghanistan (327) is higher than the ratio of 281 for Nepal estimated from the 2006 Nepal DHS (MoPH and MI, 2007), the ratio of 297 for Pakistan estimated from the 2006/7 Pakistan DHS (NIPS and MI, 2008), and the ratio of 194 for Bangladesh estimated from the 2010 Bangladesh Maternal Mortality and Health Care Survey (Streatfield et al., 2011)[3].

The data from the sibling history also can be used to examine the recent trend in pregnancy-related mortality in Afghanistan by calculating the pregnancy-related mortality ratios separately for the periods 3-6 years before the survey and 0-2 years before the survey. The pregnancy-related mortality ratio decreased from 367 (CI: 278-457) per 100,000 live births 3-6 years preceding the AMS 2010 to 270 (CI: 181-358) for the 0-2 years preceding the survey. However, given the wide confidence intervals around these estimates, it is not possible to determine whether there was an actual decrease in the pregnancy-related mortality ratio during this period.

At the same time, there have been substantial changes over time in factors that are likely to be associated with pregnancy-related mortality, including improvements in the percentage of pregnant women with antenatal care visits, the percentage of births delivered in health facilities, the percentage of births assisted at delivery by a skilled birth attendant, and the percentage of women receiving postnatal care. As discussed in Chapter 4, maternal health coverage improved markedly in the decade preceding the AMS 2010. There has also been substantial improvement in educational attainment in recent years, although the average level of educational attainment remains low. The percentage of women with no education decreased from 86 percent for women age 25-29 to 81 percent for women age 20-24 and further to 64 percent for women age 15-19. The percentage of women who have at least some secondary education doubled from 10 percent for women age 20-24 to 20 percent for women age 15-19.

For comparative purposes, estimates of pregnancy-related mortality ratios and maternal health and education indicators for three South Asian countries (Bangladesh, Nepal, and Pakistan) are shown in Table 7.3. Bangladesh and Nepal have had substantial decreases in the pregnancy-related mortality ratio in the recent past. The estimated pregnancy-related mortality ratios decreased by 49 percent in Bangladesh (from 382 in 1999/2000 to 194 in 2010), and by 48 percent in Nepal (from 539 in 1996 to 281 in 2006). The decreases in pregnancy-related mortality ratios have been accompanied by substantial improvements in delivery care in both countries and in antenatal care and educational attainment in Nepal. Among the countries shown in Table 7.3, the levels of antenatal care and delivery care for Afghanistan are closest to those in the 2006/7 Pakistan DHS survey. The pregnancy-related mortality ratios in Afghanistan are slightly higher than those estimated for Pakistan.

It is possible to compare the pregnancy-related mortality ratios for Afghanistan to the regression line that shows the relationship of pregnancy-related mortality with each of the four maternal health and education variables in Table 7.3 for the three South Asian countries excluding Afghanistan. To the extent that these indicators are important determinants of pregnancy-related mortality, it would be expected that the AMS estimates would not be too far from the regression line, The Afghanistan estimates of pregnancy-related mortality from the AMS 2010 fall very close to the regression line for ANC from a skilled provider and considerably above the regression line that shows the relationship of pregnancy-related mortality to delivery by a skilled birth attendant and delivery in a health facility (graphs not

[3] Based on the recently released Bangladesh Maternal Mortality and Health Care Survey, 2010, which showed a 40 percent decline in the maternal mortality ratio in the nine years from 2001 to 2010, from 322 to 194 (Streatfield, et al., 2011)

shown). Although the regression line in each case is based on only 4-5 surveys in nearby countries, similar graphs with six additional surveys based on modeled estimates of the pregnancy-related mortality ratios show similar results. When the pregnancy-related mortality ratio is graphed against education attainment, however, the estimate for Afghanistan falls well below the regression line. This suggests that to the extent that education is an important driver of pregnancy-related mortality, the AMS 2010 estimates may be too low.

Table 7.3 Pregnancy-related mortality ratios and associated maternal health indicators for South Asian countries

Age	Pregnancy-related mortality ratio	Percentage of women receiving antenatal care from a skilled provider[1]	Percentage of births delivered by an SBA[1]	Percentage of births delivered in a health facility	Percentage of ever-married women age 15-49 with no education
Afghanistan 2010	327	60	34	32	88
Afghanistan 2010 (excluding South zone)	315	63	34	32	86
Bangladesh 2001	382	40	12	9	47
Bangladesh 2010	194	na	27	23	na
Nepal 1996	539	24	9	8	80
Nepal 2006	281	44	19	18	63
Pakistan 2006/7	297	62	42	34	65

Source: AMS 2010 for Afghanistan; Streatfield, et al. (2011) for Bangladesh 2010; and DHS survey reports for the remaining estimates.
[1] A skilled antenatal care provider or a skilled birth attendant (SBA) is a doctor or a nurse/midwife
na = Not available

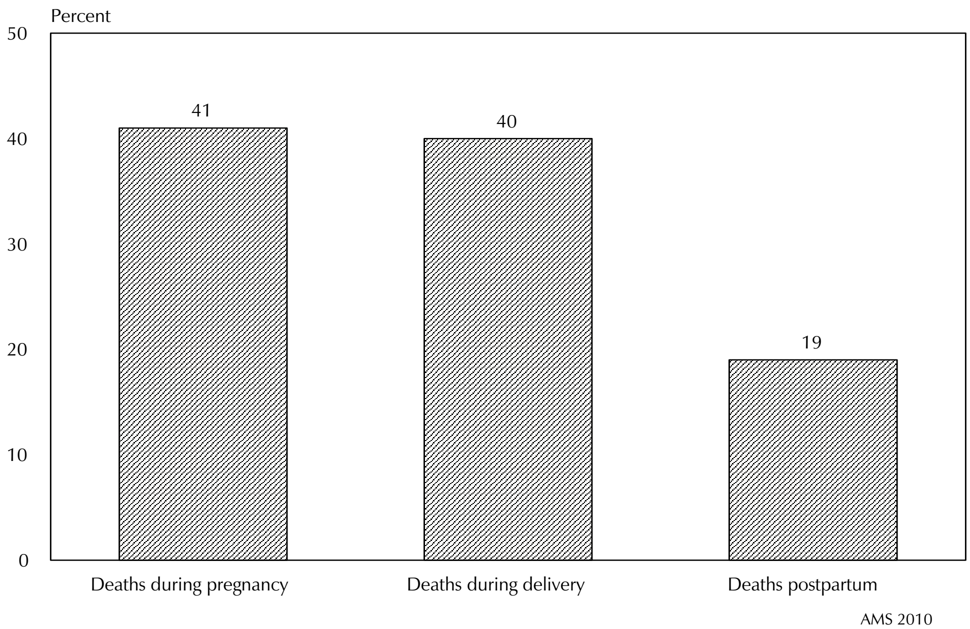
Table 7.4 and Figure 7.1 show estimates of pregnancy-related mortality for the seven-year period preceding the survey by age and timing of death. Out of a total of 256 pregnancy-related deaths identified in the AMS 2010, 41 percent occurred during pregnancy, 40 percent occurred during delivery, and 19 percent occurred in the two months after delivery. The largest number of pregnancy-related deaths occurred to women age 20-29, with about two in every five pregnancy-related deaths occurring at these ages. The proportion of pregnancy-related deaths that occurred during delivery was relatively high for women under 30 years of age (44-47 percent).

Table 7.4 Pregnancy-related mortality by age and timing of death

Percent distribution of pregnancy-related deaths in the seven years preceding the survey by timing of death, according to age group of women, Afghanistan 2010

Age	Deaths during pregnancy	Deaths during delivery	Deaths postpartum	Total	Total pregnancy-related deaths
15-19	30.8	44.1	25.1	100.0	40
20-24	44.8	45.6	9.6	100.0	55
25-29	38.3	47.0	14.7	100.0	49
30-34	44.3	31.9	23.8	100.0	39
35-39	41.0	35.0	24.0	100.0	31
40-44	49.2	36.5	14.3	100.0	30
45-49	28.6	25.8	45.6	100.0	12
Total	40.6	40.2	19.2	100.0	256

Figure 7.1 Timing of Pregnancy-related Deaths in the Five Years Preceding the Survey



7.3 PREGNANCY-RELATED MORTALITY AND MATERNAL MORTALITY FROM THE VERBAL AUTOPSY BASED ON HOUSEHOLD DEATHS

The AMS 2010 also allows the calculation of both pregnancy-related mortality and maternal mortality from information gathered in the verbal autopsy of deaths in the household in the three years preceding the survey (see Chapter 8 for a detailed discussion of the verbal autopsy method and causes of death). Table 7.5 shows pregnancy-related deaths from the verbal autopsy data in the 0-2 years preceding the survey by the age of the mother and by the time of death relative to pregnancy. The overall pregnancy-related mortality rate is 0.585 per 1,000 woman-years of exposure and the pregnancy-related mortality ratio is 374 per 100,000 live births. The pregnancy-related mortality ratio decreases from age 15-19 to age 25-29 and rises thereafter. Risks are relatively low among women age 20-34. Risks are very high for the oldest groups of women, with the difference in risk substantial between women age 20-34 and both younger and older women. A majority of pregnancy-related deaths were reported to have occurred during the postpartum period. The pregnancy-related mortality ratio calculated from the verbal autopsy is considerably higher than the pregnancy-related mortality ratio calculated from the sibling history for the same period (374 versus 270, respectively). This suggests that the pregnancy-related mortality ratio from the sibling history may underestimate pregnancy-related mortality in the recent past.

Table 7.5 Pregnancy-related mortality rates and ratios from verbal autopsy

Pregnancy-related mortality rates and ratios from verbal autopsy data for the 0-2 years preceding the survey, by age and timing of death, Afghanistan 2010

Age	Exposure time (woman-years)	Deaths during pregnancy	Deaths during delivery	Deaths postpartum	Total pregnancy-related deaths	Pregnancy-related mortality rate[1]	Age-specific fertility rate[2]	Pregnancy-related mortality ratio[3]
15-19	34,227	0.0	7.1	7.5	14.6	0.427	0.080	531
20-24	21,060	1.8	2.7	9.4	13.9	0.660	0.257	257
25-29	16,581	0.4	2.0	6.8	9.2	0.553	0.262	211
30-34	11,884	2.4	0.6	4.2	7.2	0.605	0.209	289
35-39	12,205	0.9	4.1	6.2	11.3	0.925	0.128	725
40-44	8,138	0.8	2.6	1.1	4.5	0.549	0.060	908
45-49	6,377	0.5	0.4	3.1	4.0	0.633	0.026	2,405
Total	110,472	6.7	19.5	38.4	64.7	0.585	5.117	374
General fertility ratio (GFR)							0.157	

Note: Information from the verbal autopsy in this table considers the *de jure* female household population in the exposure time calculation, obtains information about pregnancy-related deaths from the verbal autopsy, and assumes the same fertility rates as the rates for *de facto* interviewed women.
[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per woman
[3] Expressed per 100,000 live births

The verbal autopsies also provide the basis for identifying maternal deaths (that is, deaths to women while pregnant or within 42 days of the termination of a pregnancy, excluding deaths from accidental or incidental causes), as opposed to pregnancy-related deaths. The total number of maternal deaths (51) is about 20 percent lower than the number of pregnancy-related deaths reported in Table 7.5. The estimated maternal mortality ratio is 297 per 100,000 live births. As is the case for pregnancy-related mortality, the maternal risk is relatively low among women age 20-34 (data not shown).

7.4 Conclusion

The pregnancy-related mortality ratio in Afghanistan based on sibling histories is estimated to be 327 per 100,000 births for the seven years preceding the AMS 2010 survey. This means that for every 1,000 live births, it is estimated that about 3 women die during pregnancy, in childbirth, or in the two months after delivery. With the Gakidou-King recommended adjustment, the pregnancy-related mortality ratio increases to 372 per 100,000 births. The AMS 2010 survey estimates are much lower than previous estimates that were based on a very geographically limited and nonrepresentative sample. However, the AMS 2010 estimates of pregnancy-related mortality are higher than the estimates for Bangladesh, Nepal and Pakistan. The AMS estimates appear to be consistent with the level of ANC from a skilled provider, skilled birth attendance, and delivery in a health facility, which have increased rapidly in Afghanistan in recent years. However, the pregnancy-related mortality ratios are much lower than would be expected on the basis of the average educational attainment of women.

Pregnancy-related deaths are a leading cause of death for women in their childbearing years. Overall, based on the sibling history, in the seven years before the survey, 41 percent of deaths to women in their childbearing years in Afghanistan were due to pregnancy-related causes. From the sibling history, it is estimated that under current conditions approximately 1 in every 50 women in Afghanistan will die from a pregnancy-related cause during her lifetime. The lifetime risk of pregnancy-related death is five times as high in rural areas as in urban areas.

For the three years before the survey, estimates of pregnancy-related mortality are available from both the sibling history and household information on deaths. For that period, the estimated pregnancy-related mortality ratio from household information (374) is about 39 percent higher than the estimate based on the sibling history (270). If that same relative difference were to be applied to the pregnancy-related mortality ratio of 327 from the sibling history for the seven years before the survey, the resulting estimate of the pregnancy-related mortality ratio for the seven-year period would increase to 453. The expected age pattern of the risk of pregnancy-related mortality is seen in the household data, with a particularly high risk for very young women (age 15-19) and for older women (age 35-49).

There are several ways to assess the quality of the AMS data used for the estimates in this chapter. Response rates for the AMS 2010 are high at both the household and woman's level. Siblings that are reported have almost complete information on survival status, the age of living siblings and the years since death of deceased siblings. The distribution of the year of birth of siblings is similar to the distribution of the respondents' own years of birth, which would be expected if the data are of reasonable quality. However, there appears to be some omission in the reporting of siblings, particularly of older women. In addition, the sex ratio at birth of siblings that women reported is outside the high end of the normal biological range, indicating that some sisters were likely to be underreported. This suggests that the pregnancy-related mortality ratios are likely to be underestimated to some extent.

As in any sample survey, the mortality rates may vary somewhat due to heterogeneity in the population and clustering in the sample design. In the AMS 2010, the confidence interval around the pregnancy-related mortality ratio of 327 from the sibling history is 260-394. The confidence intervals of the estimates show the likely range within which the true value of the pregnancy-related mortality ratio is likely to fall. Based on the sampling errors, the pregnancy-related mortality ratio for the seven years preceding the AMS 2010 could be as high as 394. If an additional 14 percent is added on because of the higher estimate using the Gakidou-King method, the pregnancy-related mortality ratio could be as high as 449. If the pregnancy-related mortality ratio is taken from the verbal autopsy for the three years before the survey (374), the highest ratio would still be well below the 500 level even after the confidence interval around the estimate is considered.

CAUSE OF DEATH 8

One of the main objectives of the Afghanistan Mortality Survey (AMS) 2010 is to ascertain the cause of death. Information on cause of death is essential for policy makers to assess the needs of health systems and to set priorities for interventions. Ideally such data would be generated from a vital statistics system. However, this system is not functioning well in Afghanistan, as no death certificate is issued in most cases and reliable data on cause of death are not available.

To address this information gap, the AMS included collection of data on cause of death through interviews with the relatives of the deceased. These “verbal autopsies” are generally not as accurate as medical certification of the cause of death but can be useful in identifying the probable cause of death in broad groupings.

The verbal autopsy (VA) questionnaire and manual used in the AMS 2010 were adapted from SAmple Vital registration with Verbal autopsy (SAVVY). SAVVY is a library of best practice methods for improving the quality of vital statistics where high coverage of civil registration and good cause of death data are not available. SAVVY is not a substitute for universal civil registration. Its components can, however, fill short- to medium-term needs for critical information on births, deaths, and cause of death at the population level. The Verbal Autopsy instrument administered in the AMS 2010 used international standards for verbal autopsy forms, death certification and ICD coding procedures developed in collaboration with WHO, the Health Metrics Network, and other stakeholders. The purpose of the VA was to describe the cause structure of mortality at the community or population level where no better alternative sources exist. VA is not intended to diagnose cause of death at the individual level. While VA has some limitations, the shortcomings of the tool are known and quantifiable.

Interviewers visited households where deaths occurred and interviewed relatives or caregivers using VA forms. Once completed, these forms were used to determine probable causes of death. This information can be used at many levels of the health system for planning, reporting, monitoring, evaluating, and priority setting.

8.1 SOURCE OF DATA

During the household interview, questions were asked about deaths among usual residents of the household since 21 March 2005 (1 Hammal 1384), a date that was five years before the start of the AMS data collection. Probing questions were included to elicit early infant deaths and stillbirths. For each death, the name, age at death and sex of the deceased were recorded. Following the household interview, the Verbal Autopsy (VA) questionnaire was administered to a caregiver or family member of the deceased. One of three separate verbal autopsy questionnaires was used, depending on the age at death:

1. Form 1 for deaths to children aged 0-28 days (neonatal)
2. Form 2 for deaths to children aged 29 days-11 years (post neonatal and child)
3. Form 3 for deaths to adults aged 12 years and above (adult).

Key informants, that is, person(s) identified as present at the time of death, were interviewed to ensure accurate information surrounding the circumstances that lead to the death of the deceased.

The VA interview started by checking the date of death and subsequent questions were only asked if the death occurred since 21 March 2007 (1 Hammal 1386), three years before the start of the AMS interviewing.[1] The VA questionnaires include a wide range of questions on signs and symptoms during the disease or injury preceding death. In addition, the forms also included an open narrative section allowing respondents to describe verbatim the illness and events that led to the death. There were also questions about the health and status of mothers (in the case of perinatal, neonatal, and child deaths), and questions that specifically relate to women age 12-49 years. Additional information was collected on previously diagnosed conditions, medications used, utilization of health services, place of death, and behavioral and environmental risk factors.

After a 2-week training conducted by a physician with expertise in verbal autopsies, a panel of 15 Afghan physicians reviewed the verbal autopsy questionnaires. Each form was reviewed independently by two physicians to assign the underlying cause of death and in case of discordance, the questionnaire was reviewed by both physicians together and a final cause was accepted if both physicians agreed. If a cause could not be ascertained or both physicians disagreed, the cause was considered as undetermined. The final cause was then coded using the 10th revision of the WHO International Classification of Diseases (ICD-10). There are alternative computer-algorithm based methods for assigning the most probable cause of death, but these were not used for the analysis presented in this report.

Overall, 6,089 deaths were reported in 5,257 households, including 14 percent of households reporting two or more deaths. A verbal autopsy questionnaire was administered for 6,044 deaths (99 percent). Of these deaths, 536 stillbirths were identified and 2,106 deaths occurred between 21 March 2005 (1 Hammal 1384) and 20 March 2007 (30 Hut 1385). The full verbal autopsy questionnaire was administered to the remaining 3,402 deaths. As the analysis is restricted to deaths that occurred in the three years prior to the survey date, a further 245 deaths occurring between 1 Hammal 1386 and the date of interview that were more than three years were excluded; therefore, all analysis in this chapter is based on the remaining 3,157 deaths.

8.2 CAUSE OF DEATH BY AGE AND SEX

The percent distribution of deaths by cause according to sex and age group is presented in Table 8.1. Causes are grouped according to broad categories of classification in the ICD-10. Only a small proportion of deaths (3 percent) were unable to be classified by underlying cause.

About 35 percent of all deaths in Afghanistan are due to non-communicable diseases like cardiovascular diseases and cancers, while about three in ten are due to communicable diseases and infections. Among females, the leading causes of death are infectious and parasitic diseases (18 percent) and cardiovascular diseases (18 percent), followed by respiratory infections (15 percent) and perinatal conditions (12 percent). Respiratory infections, infectious/parasitic diseases, and perinatal conditions are the leading causes of death among female children under five years, accounting for 77 percent of deaths, while cardiovascular diseases predominate at ages 15-59 years (23 percent) and 60 and over (45 percent). Maternal conditions are responsible for one in five deaths to women at ages 15-59 years, while injuries account for 9 percent of deaths in this age group. Notable is the high proportion of female deaths due to unintentional injuries at ages 5-14 years when mortality rates tend to be low (29 percent).

[1] Filter questions to capture deaths at the household level were collected for all deaths in the five years (since 1 Hammal 1384) before the survey. However, the detailed verbal autopsy questions were administered only for deaths in the three years (since 1 Hammal 1386) prior to the survey. This was done to discourage interviewers from deliberately aging the dates of death to avoid administering the VA in an effort to reduce their workload. By doing this, even if deaths that occurred in the five years were deliberately recorded as having occurred six years prior to the survey it is less likely to result in underreporting of deaths in the three years before the survey.

The cause of death pattern among males is different as injury-associated mortality accounts for a much greater proportion of deaths (21 percent for all ages—see Figure 8.1). The distributions of causes of death among males aged 0-4, 5-14 and 60 and over are similar to those for females, but with higher levels of injury-related deaths. At age group 15-59, half of the male deaths are due to injuries, roughly evenly divided between unintentional and intentional injuries.

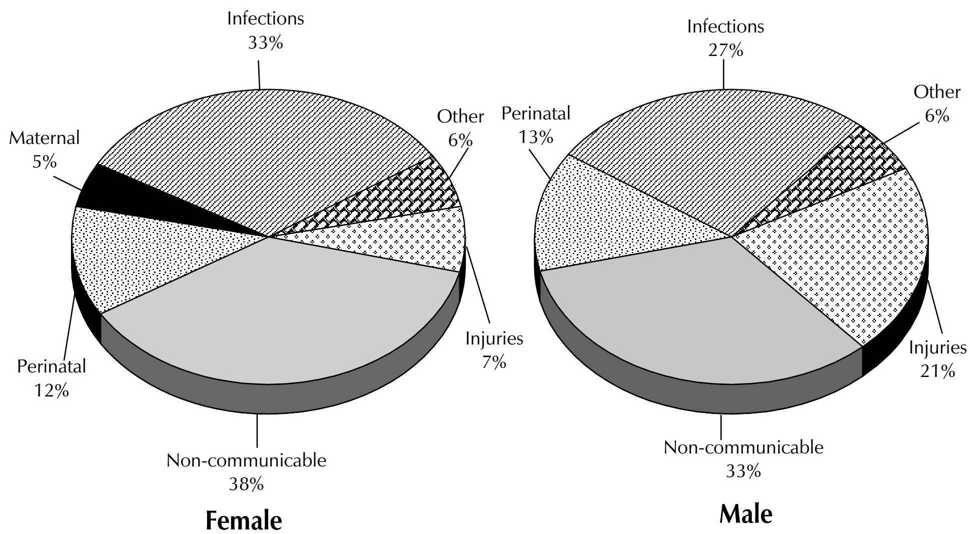
Table 8.1 Cause of death—all ages

Percent distribution of female and male deaths in the three years before the survey by underlying cause of death, according to broad age groups, Afghanistan 2010

	Female					Male				
Underlying cause of death	0-4	5-14	15-59	60+	Total	0-4	5-14	15-59	60+	Total
Communicable, maternal, perinatal, and nutritional conditions	**82.8**	**43.0**	**38.2**	**19.3**	**52.8**	**78.1**	**33.4**	**9.9**	**18.7**	**42.6**
Infections and parasitic diseases	22.0	25.3	15.2	13.7	18.3	21.7	19.7	7.7	13.7	16.2
Respiratory infections	28.1	17.7	0.8	5.5	14.7	19.7	11.7	1.7	4.9	10.9
Maternal conditions	0.0	0.0	20.3	0.0	5.1	0.0	0.0	0.0	0.0	0.0
Perinatal conditions	27.3	0.0	0.0	0.0	11.8	31.3	0.0	0.0	0.0	13.0
Nutritional deficiencies	5.4	0.0	2.0	0.2	2.9	5.4	2.0	0.5	0.1	2.5
Noncommunicable diseases	**7.2**	**24.8**	**52.3**	**75.7**	**37.5**	**8.0**	**20.7**	**37.6**	**72.4**	**33.3**
Malignant neoplasms	0.8	13.0	16.0	12.6	8.4	0.7	4.9	11.4	14.6	7.3
Other neoplasms	0.0	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.2	0.1
Diabetes mellitus	0.1	0.0	4.7	5.8	2.7	0.1	0.0	3.1	10.6	3.7
Endocrine disorders	0.3	0.0	0.0	0.2	0.2	0.5	0.0	0.1	0.2	0.3
Neuropsychiatric conditions	0.5	1.8	2.5	0.6	1.1	1.2	4.9	2.1	0.5	1.5
Sense organ diseases	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Cardiovascular diseases	0.4	1.2	23.2	45.2	17.9	0.4	1.5	14.2	38.4	14.0
Respiratory diseases	0.2	1.7	1.9	6.4	2.3	0.2	1.9	1.9	4.7	1.9
Digestive diseases	1.4	1.6	1.9	3.4	2.1	0.9	4.5	2.7	1.4	1.8
Genitourinary diseases	0.3	1.7	1.4	1.3	0.9	0.2	1.4	1.9	1.5	1.0
Skin diseases	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.4	0.3
Congenital anomalies	3.2	3.8	0.2	0.1	1.6	3.4	1.7	0.0	0.0	1.6
Injuries	**6.0**	**31.0**	**8.8**	**0.9**	**6.7**	**10.7**	**41.4**	**50.3**	**5.0**	**20.8**
Unintentional injuries	5.8	29.3	7.6	0.6	6.1	10.3	32.9	23.4	3.0	13.2
Intentional injuries	0.2	0.0	1.2	0.2	0.5	0.4	8.2	26.1	2.0	7.4
Ill-defined injuries / accidents	0.0	1.7	0.0	0.0	0.1	0.1	0.4	0.8	0.0	0.2
Unclassified	**4.0**	**1.2**	**0.7**	**4.1**	**3.0**	**3.2**	**4.6**	**2.3**	**4.0**	**3.3**
Ill-defined diseases	0.7	0.0	0.3	2.4	1.0	1.0	3.0	0.9	3.7	1.9
Incorrect ICD code	3.3	1.2	0.4	1.7	2.0	2.2	1.6	1.4	0.2	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of deaths	574	70	337	348	1,329	754	151	414	493	1,813

Note: Data are derived from the verbal autopsy questionnaires. There were no deaths reported in the categories "Musculoskeletal diseases" or "Oral conditions."

Figure 8.1 Causes of Female and Male Deaths



8.3 INJURY-RELATED DEATHS

Table 8.2 shows the percent distribution of the 89 female and 376 male deaths attributed to injury by broad age group. Among men age 15 and over, war and violence account for just under half of all injury-related deaths (48 percent). War and violence are also a significant cause of death due to injury for boys under age 15 years (10 percent). This is not the case for women and girls.

Table 8.2 Injury-related deaths

Percent distribution of female and male injury-related deaths in the three years before the survey by type of injury, according to broad age groups, Afghanistan 2010

	Female			Male		
Type of injury	0-14	15+	Total	0-14	15+	Total
Unintentional injuries	**95.9**	**(85.1)**	**91.9**	**88.6**	**48.0**	**63.5**
Road traffic accidents	12.4	(26.9)	17.7	18.9	27.2	24.0
Poisoning	1.6	(3.4)	2.3	0.8	0.0	0.3
Fall	27.8	(9.1)	20.9	14.3	2.5	7.0
Fire	6.3	(26.8)	13.8	2.4	0.0	0.9
Drowning	15.6	(0.0)	9.8	20.8	3.8	10.3
Other unintentional injuries	32.1	(18.8)	27.4	31.5	14.5	21.0
Intentional injuries	**2.0**	**(14.9)**	**6.8**	**10.6**	**50.6**	**35.4**
Self-inflicted injuries	0.0	(5.1)	1.9	0.6	2.9	2.0
Violence	0.0	(9.8)	3.6	6.1	22.4	16.2
War	2.0	(0.0)	1.3	4.0	25.4	17.2
Ill-defined injuries/accidents	**2.1**	**(0.0)**	**1.3**	**0.7**	**1.3**	**1.1**
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of injury deaths	56	33	89	144	233	376

Note: Data are derived from the verbal autopsy questionnaires. Figures shown in parentheses are based on 25-49 unweighted cases.

Road traffic accidents cause 24 percent of male injury-related deaths and 18 percent of female deaths; they account for a sizeable proportion of injury-related deaths for both sexes and all age groups. Among children under age 15, deaths from drowning and falls account for sizeable proportions of injury-related deaths. Fires are a common cause of injury-related deaths to women, but not for men.

8.4 CAUSES OF MATERNAL DEATHS

Among the deaths investigated through the Verbal Autopsy Questionnaire were 64 deaths due to maternal conditions. As shown in Table 8.3, hemorrhage is by far the leading cause of maternal deaths in Afghanistan (56 percent). Eclampsia is associated with one-fifth of maternal deaths and prolonged or obstructed labor with 11 percent of maternal deaths. The percentage of maternal deaths attributed to sepsis is relatively low (5 percent). Also, indirect causes of maternal death—pre-existing conditions and diseases aggravated by pregnancy and delivery—are relatively rare (5 percent), which may be due to underreporting of such causes in the verbal autopsy interview, or coding preferences of the physicians.

Table 8.3 Causes of maternal deaths

Percent distribution of maternal deaths in the three years before the survey by cause of death, Afghanistan 2010

Cause	Percentage
Hemorrhage	55.9
Prolonged or obstructed labor	10.7
Other direct causes	3.6
Pre-eclampsia / Eclampsia	19.8
Sepsis / infection	5.0
Indirect causes	5.1
Total	100.0
Number of deaths	64

Note: Data are derived from the verbal autopsy questionnaires.

Hemorrhage was found to be the major cause of maternal deaths in three of the four sites studied in the 2002 RAMOS study in Afghanistan (Bartlett et al., 2005). Hemorrhage was also found to be the leading cause of maternal deaths in neighboring countries like Bangladesh (NIPORT et al., 2003) and Pakistan (NIPS and MI, 2008).

8.5 CAUSES OF CHILDHOOD DEATHS

Table 8.4 presents the distribution of causes of death among children under five by age group for both sexes combined. The leading causes of death are acute respiratory infections (ARI) and other severe infections, each of which accounts for about 20 percent of under-5 deaths in Afghanistan. Disorders related to the perinatal period also cause a substantial proportion of childhood deaths (15 percent). The latter category may include some deaths due to asphyxia, as the proportion of neonatal deaths assigned to this cause (3 percent) is considerably lower than expected based on data from other populations. Among neonatal deaths, disorders related to the perinatal period are associated with 35 percent of deaths. Acute respiratory infection is the most common cause of death in the postneonatal (35 percent) and early childhood period (23 percent). Injury is also a common cause of death among children aged 12-59 months (22 percent). The relatively low proportion of deaths attributed to diarrhea is remarkable.

Table 8.4 Causes of deaths among children under five

Percent distribution of neonatal, postneonatal, child, and under five deaths in the three years before the survey by underlying cause of death, Afghanistan 2010

Underlying cause of death	Neonatal (< 1 month)	Post-neonatal (1-11 months)	Child (12-59 months)	Under five
Tetanus	4.0	0.2	0.1	1.6
Congenital abnormality	2.9	3.4	4.0	3.3
Injury	2.6	6.3	22.1	8.7
Birth asphyxia	3.1	0.2	0.4	1.3
Birth injury	0.3	0.0	0.0	0.1
Measles	0.1	3.2	3.3	2.1
Diarrhea	0.9	9.7	9.3	6.2
Acute respiratory infection	11.5	35.4	23.4	23.4
Other serious infections	26.4	14.7	16.9	19.7
Pre-term/low birthweight	11.8	2.8	0.0	5.6
Malnutrition	0.1	9.7	5.9	5.1
Other conditions	1.0	9.2	11.6	6.6
Perinatal-related disorders	34.8	3.2	1.4	14.8
Other/unidentified causes	0.6	1.8	1.7	1.3
Total	100.0	100.0	100.0	100.0
Number of deaths	507	505	316	1,328

Note: Data are derived from the verbal autopsy questionnaires.

8.6 CONCLUSION

An important contribution of the AMS 2010 is information on cause of death, data previously not available on a national scale in Afghanistan. About 35 percent of all deaths in Afghanistan are due to non-communicable diseases like cardiovascular diseases and cancers, while about three in ten are due to communicable diseases and infections. Injuries—especially war and violence—account for a much higher proportion of deaths to men (21 percent) than to women (7 percent). Hemorrhage accounts for over half of maternal deaths. The leading causes of deaths to children under five are acute respiratory infections and other serious infections, each of which accounts for about one in five deaths in this age group.

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SAMPLE IMPLEMENTATION *Appendix* A

A.1 INTRODUCTION

The Afghanistan Mortality Survey 2010 (AMS 2010) was the first nationwide survey of its kind. A nationally representative sample of 24,000 households was selected. All women 12-49 who were usual residents of the selected households or who slept in the selected households the night before the survey were eligible for the survey. The survey was expected to result in about 28,800 interviews of women 12-49. The main objectives of the AMS 2010 were to provide national estimates of (maternal) mortality, causes and determinants of mortality for adults, children, and infants by age, sex, wealth status, and other key socioeconomic background variables. The survey also provides insight into risk factors that may have precipitated death, such as low utilization and coverage of basic health services, low socio-economic status, and other determinants. Finally, the survey also provides other demographic indicators including life expectancy, crude birth and death rates, and direct estimates of under-5 mortality rates, adult mortality rates, the maternal mortality ratio, and total fertility rates.

The survey was designed to produce representative estimates for most of the indicators for the country as a whole, for the urban and the rural areas separately, and for each of the three survey domains which are regroupings of the eight geographical regions. The compositions of the domains are given below:

- The North, which combines the Northern region and the North Eastern region, consists of 9 provinces: Badakhshan, Baghlan, Balkh, Faryab, Jawzjan, Kunduz, Samangan, Sari Pul and Takhar.
- The Central, which combines the Western region, the Central Highland region and the Capital region, consists of 12 provinces: Badghis, Bamyan, Daykundi, Farah, Ghor, Hirat, Kabul, Kapisa, Logar, Panjsher, Parwan and Maydan Wardak.
- The South, which combines the Southern region, the South Eastern region and the Eastern region, consists of 13 provinces: Ghazni, Hilmand, Kandahar, Khost, Kunar, Laghman, Nangarhar, Nimroz, Nuristan, Paktika, Paktya, Uruzgan and Zabul.

The AMS 2010 used four questionnaires:

- A Household Questionnaire that was administered in all sampled households to collect information on household composition, housing characteristics and household possessions; and identify all deaths that occurred in the preceding five years before the survey;
- Each identified death that occurred in the selected household in the three years before the survey was followed up with one of three Verbal Autopsy Questionnaires, depending on the age at death: deaths to children 0-28 days; deaths to children 29 days-11 years; and deaths to adults age 12 years and above.
- A Woman's Questionnaire was administered to all women age 12-49 years, in order to obtain basic socioeconomic characteristics as well as key demographic indicators such as the total fertility rate, childhood mortality rates and utilization of maternity care services. The Woman's Questionnaire includes a sibling history module from which was derived adult mortality rates, and pregnancy-related mortality rates and ratios.

- The Cluster Level Questionnaire was used to gather information from the head of the village or some other knowledgeable informant, on access to basic amenities such as the presence of a cell phone, a paved road, a police station or post.

A.2 SAMPLING FRAME

The sampling frame used for the AMS 2010 was the preparatory frame for the 2011 Afghan Population and Housing Census (APHC 2011), provided by the Central Statistical Organization (CSO). CSO has an electronic file consisting of 21,194 enumeration areas (EA) created for the APHC 2011. An EA is a geographic area consisting of a convenient number of dwelling units which serves as counting units for the census. In urban areas, an EA is a city block; in rural areas, an EA is either a village, or a group of small adjacent villages, or a part of a large village. The frame file contains information about the location (region, district and control area), the type of residence (urban and rural), and the estimated number of residential households for each of the 21,194 EAs. Sketch maps are also available for each EA which delimit the geographic boundaries of the EA. Since this is a preparatory frame, the EA sizes are rough estimates and quite homogenous, with an average of 185 households per EA which is an adequate size for a primary sampling unit (PSU) in a cluster survey.

Administratively, Afghanistan is divided into 34 provinces; each province is subdivided into districts, with a total number of 398 districts nationwide. The 34 provinces are regrouped to form eight geographical regions. Table A.1 shows the household distribution, the number of EAs by province and by type of residence. Among the 21,194 EAs, 3,648 are in urban areas and 17,546 are in rural areas. The average size of an EA by number of households is 230 households in an urban EA and 176 in a rural EA, with an overall average of 185 households per EA. In Afghanistan, 21.4 percent of the households reside in urban areas, and 78.6 percent reside in rural areas. Among the 34 provinces, most of have a very small urban part, and two of them (Nuristan and Panjsher) have no urban areas at all. The provinces are very different in size; with the largest province (Kabul) representing 11.8 percent of the total households of the country, and the smallest province (Panjsher) representing only 0.4 percent. Table A.2 shows the distribution of households by domain and type of residence. The domains have more or less equal size; with the smallest one, the North domain, representing 27.7 percent of the total households, and the largest one, the Central domain, representing 38 percent of the total households. The urban composition of the three domains are vastly different, with 32.8 percent of the Central domain being urban compared to only 9.7 percent of the South domain. The low proportion of the country that is urban required an oversampling in urban areas in order to produce reliable estimates for the urban area which is a study domain for the AMS 2010.

Some areas in the south of the country were considered difficult to access due to security problems, especially the rural areas of Kandahar, Hilmand and Zabul provinces. For security reasons, the rural areas of these three provinces were excluded from the sample selection; however, the urban areas of these provinces were included in the sample selection. The excluded areas represent 8.8 percent of the total households of the country.

Table A.1 Percentage distribution of households and number of EAs by province and by type of residence

Province	Urban		Rural		Province	
	Households	EAs	Households	EAs	Households	EAs
Badakhshan	6.2	37	93.8	918	3.6	955
Badghis	3.5	12	96.5	555	2.2	567
Baghlan	25.0	132	75.0	572	3.4	704
Balkh	36.0	292	64.0	606	4.8	898
Bamyan	5.6	13	94.4	321	1.5	334
Daykundi	1.4	5	98.6	492	2.2	497
Farah	6.1	22	93.9	408	2.3	430
Faryab	14.6	87	85.4	690	3.6	777
Ghazni	4.2	30	95.8	897	4.4	927
Ghor	1.5	7	98.5	608	2.9	615
Hilmand	6.9	60	93.1	1,003	5.2	1,063
Hirat	26.0	539	74.0	1,201	7.7	1,740
Jawzjan	27.5	82	72.5	289	1.9	371
Kabul	80.1	1,458	19.9	524	11.8	1,982
Kandahar	32.8	241	67.2	520	4.1	761
Kapisa	0.5	1	99.5	336	1.3	337
Khost	5.8	20	94.2	464	2.3	484
Kunar	2.9	12	97.1	652	2.4	664
Kunduz	28.4	148	71.6	647	3.2	795
Laghman	0.4	1	99.6	364	1.6	365
Logar	2.1	4	97.9	247	1.3	251
Nangarhar	15.8	158	84.2	1,183	5.8	1,341
Nimroz	23.3	20	76.7	82	0.5	102
Nuristan	0.0	0	100.0	193	0.7	193
Paktika	0.6	3	99.4	520	3.0	523
Paktya	4.6	14	95.4	393	1.9	407
Panjsher	0.0	0	100.0	101	0.4	101
Parwan	27.1	94	73.0	386	2.3	480
Samangan	18.7	41	81.3	277	1.5	318
Sari Pul	8.0	25	92.0	379	2.0	404
Takhar	11.7	72	88.3	740	3.6	812
Urozgan	4.5	10	95.5	265	1.2	275
Maydan Wardak	0.6	2	99.4	444	2.2	446
Zabul	2.5	6	97.5	269	1.3	275
Afghanistan	**21.4**	**3,648**	**78.6**	**17,546**	**100.0**	**21,194**

Source: Preparatory sampling frame for APHC 2011

Table A.2 Percentage distribution of households and number of EAs by domain and by type of residence

Domain/region	Urban		Rural		Domain/region	
	Households	EAs	Households	EAs	Households	EAs
North	**20.3**	**916**	**79.7**	**5,118**	**27.7**	**6,034**
North Eastern	17.3	389	82.7	2,877	13.9	3,266
Northern	23.2	527	76.8	2,241	13.8	2,768
Central	**32.8**	**2,157**	**67.2**	**5,623**	**38.0**	**7,780**
Capital	52.5	1,559	47.5	2,038	19.2	3,597
Central Highland	3.1	18	96.9	813	3.7	831
Western	14.9	580	85.1	2,772	15.1	3,352
South	**9.7**	**575**	**90.3**	**6,805**	**34.3**	**7,380**
Eastern	9.5	171	90.5	2,392	10.4	2,563
South Eastern	3.4	37	96.7	1,377	7.2	1,414
Southern	12.5	367	87.5	3,036	16.7	3,403
Afghanistan	**21.4**	**3,648**	**78.6**	**17,546**	**100.0**	**21,194**

Source: Preparatory sampling frame for APHC 2011

A.3 Structure of the Sample and the Sampling Procedure

The sample for the AMS 2010 was a stratified sample selected in two stages from the sampling frame. Stratification was achieved by separating each domain into urban and rural areas. Because of the low urban proportion for most of the provinces, the urban areas all together of each domain form a single sampling stratum, which is the urban stratum of the domain. On the other hand, the rural area of each domain is further split into strata according to province, that is, the rural area of each province forms a sampling stratum. In total, 34 sampling strata were created after excluding the rural areas of Kandahar, Hilmand and Zabul from the domain of the South. Among the 34 sampling strata, 3 of them are urban strata; the remaining 31 strata are rural strata which correspond to the total number of provinces with their rural areas included in sample selection. Samples were selected independently in each sampling stratum, by a two-stage selection. Implicit stratification and proportional allocation has been achieved at each of the lower administrative levels within a sampling stratum, by sorting the sampling frame according to administrative units at different levels within each stratum and by using a probability proportional to size selection at the first stage of sampling.

The 24,000 sample households were equally allocated to each sample domain, that is, 8,000 households per domain which is the minimum number of households needed in order to get an adequate precision for the maternal mortality ratios (MMR) estimation at each domain. The 8,000 households were then allocated to each sampling stratum within the survey domain. Ideally households should be allocated to the sampling stratum proportionally to the stratum size, but this would result in a very small urban sample for the country as a whole because of the small proportion of the country that is urban. In order that the minimum requirement of sample size be guaranteed for both urban and rural areas, because urban and rural areas are two different study domains, the urban area in each survey domain was oversampled. After fixing the urban sample size of each domain, the remaining sample was allocated to the rural strata of the domain with sample sizes proportional to their size. A fixed number of 32 households were selected from each EA in the second stage; the household allocation for each sampling stratum was then converted to the number of EAs. As a result of rounding, the total number of EAs selected was 751. Table A.3 shows the sample distribution of households and EAs. The total number of households selected for the AMS 2010 was 24,032 of which 7,584 are in urban areas and 16,448 are in rural areas. Among the 751 EAs selected, 237 are in urban areas and 514 in rural areas.

In the first stage, 751 EAs were selected with probability proportional to the EA size and with independent selection in each sampling stratum with the sample allocation as given in Table A.3. Before fieldwork, a household listing operation was carried out in all of the selected EAs. The household listing operation consists of visiting each of the 751 selected EAs; drawing a location map and a detailed sketch map; and recording on the household listing forms all structures found in the EA, and all households residing in the structure with the address and the name of the head of the households. The resulting list of households served as the sampling frame for the selection of households at the second stage of sampling. The sample households for the AMS 2010 were selected randomly with equal probability from the newly created household listings for every cluster. Interviewers were asked to interview only the pre-selected households; no replacement of non-respondent households was allowed in the field during survey implementation. This was aimed at preventing the introduction of any bias by interviewers should they attempt to replace households which are easier to reach. Interviewers were trained to make every effort to interview all pre-selected households thereby reducing the non-response bias to a minimum. Excel programs were prepared to facilitate the household selection in the central office.

Some of the selected EAs were too large. In order to minimize the task of listing all the households in a large EA, the selected EAs with an estimated number of households greater than 200 were segmented. Only one segment was selected for the survey with probability proportional to the segment size. The methodology and the detailed household listing procedure were addressed in the Household Listing Manual.

Table A.3 Sample allocation of households and EAs

Domain	Stratum name	Stratum number	Households allocated	EAs allocated
North	Rural of Baghlan	9	672	21
	Rural of Badakhshan	17	896	28
	Rural of Takhar	18	832	26
	Rural of Kunduz	19	576	18
	Rural of Samangan	20	320	10
	Rural of Balkh	21	800	25
	Rural of Sari Pul	22	480	15
	Rural of Jawzjan	28	352	11
	Rural of Faryab	29	800	25
	Urban of North	35	2,304	72
	Total North		8,032	251
Central	Rural of Kabul	1	384	12
	Rural of Kapisa	2	224	7
	Rural of Parwan	3	288	9
	Rural of Maydan Wardak	4	352	11
	Rural of Logar	5	192	6
	Rural of Panjsher	8	96	3
	Rural of Bamyan	10	224	7
	Rural of Ghor	23	480	15
	Rural of Daykundi	24	352	11
	Rural of Badghis	31	352	11
	Rural of Hirat	32	960	30
	Rural of Farah	33	352	11
	Urban of Central	36	3,744	117
	Total Central		8,000	250
South	Rural of Nangarhar	6	1,408	44
	Rural of Laghman	7	448	14
	Rural of Ghazni	11	1,248	39
	Rural of Paktika	12	864	27
	Rural of Paktya	13	512	16
	Rural of Khost	14	640	20
	Rural of Kunar	15	672	21
	Rural of Nuristan	16	224	7
	Rural of Uruzgan	25	320	10
	Rural of Nimroz	34	128	4
	Urban of South	37	1,536	48
	Total South		8,000	250
Afghanistan			**24,032**	**751**

Note: The rural areas of Kandahar, Hilmand, and Zabul provinces are excluded for sample selection due to security concerns.

A.4 Selection Probability and Sampling Weight

Because of the non-proportional allocation of the sample to the different survey domains and to their urban and rural areas, sampling weights are required for any analysis using AMS 2010 data to ensure the actual representativeness of the survey results at the national level and as well as at the domain level. Since the AMS 2010 sample was a two-stage stratified cluster sample, sampling weights were calculated based on sampling probabilities separately for each sampling stage and for each cluster. We use the following notations

P_{1hi}: first-stage sampling probability of the i^{th} cluster in stratum h
P_{2hi}: second -stage sampling probability within the i^{th} cluster (household selection)

Let a_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the i^{th} cluster, and $\sum M_{hi}$ the total number of households in the stratum. The probability of selecting the i^{th} cluster in the AMS 2010 sample is calculated as follows:

$$\frac{a_h\ M_{hi}}{\sum M_{hi}}$$

Let b_{hi} be the proportion of households in the selected segment with respect to the total number of households in the EA i in stratum h if the EA is segmented, otherwise $b_{hi} = 1$. Then the probability of selecting cluster i in the sample is:

$$P_{1hi} = \frac{a_h\ M_{hi}}{\sum M_{hi}} \times b_{hi}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h, let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability for each household in cluster i of stratum h is therefore the production of the two stages selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The sampling weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

A spreadsheet containing all sampling parameters and selection probabilities was prepared for facilitating the calculation of sampling weights. Sampling weights were adjusted for household non-response as well as for individual non-response, for household and individual surveys, respectively. The differences in the household weights and the individual weights were introduced by individual non-response. The final weights were normalized in order to give the total number of un-weighted cases equal to the total number of weighted cases at the national level, for both household weights and individual weights, respectively.

In Appendix B, sampling errors were calculated for selected indicators of greater importance, for both national estimates and domain estimates.

Table A.4 Sample implementation by residence and zone

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Afghanistan 2010

Result	Residence		Region								Total
	Urban	Rural	North Eastern	Northern	Western	Central Highlands	Capital	Eastern	Southern	South Eastern	
Selected households											
Completed (C)	96.0	98.4	98.7	97.3	96.7	97.3	96.0	99.4	97.1	99.3	97.6
Household present but no competent respondent at home (HP)	0.5	0.1	0.2	0.2	0.4	0.0	0.4	0.2	0.1	0.1	0.2
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Refused (R)	1.5	0.5	0.4	0.6	0.3	0.2	1.9	0.0	1.7	0.4	0.8
Dwelling not found (DNF)	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.2	0.0	0.0
Household absent (HA)	0.6	0.4	0.1	0.8	1.4	0.6	0.4	0.1	0.4	0.0	0.5
Dwelling vacant/address not a dwelling (DV)	0.9	0.5	0.5	0.8	1.0	1.7	0.8	0.2	0.5	0.1	0.6
Dwelling destroy (DD)	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Other (O)	0.2	0.1	0.0	0.2	0.1	0.0	0.2	0.0	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	7,393	15,504	3,866	3,991	2,848	479	4,549	3,202	2,362	1,600	22,897
Household response rate (HRR)[1]	97.8	99.4	99.4	99.1	99.2	99.6	97.5	99.7	98.0	99.5	98.9
Eligible women											
Completed (EWC)	97.5	98.5	99.4	98.1	98.1	97.8	96.7	99.7	97.6	98.0	98.2
Not at home (EWNH)	1.3	0.6	0.3	1.1	1.5	0.4	1.7	0.2	0.5	0.2	0.8
Postponed (EWP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (EWR)	0.5	0.5	0.0	0.2	0.2	0.0	0.6	0.0	1.3	1.8	0.5
Partly completed (EWPC)	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.1
Incapacitated (EWI)	0.3	0.1	0.0	0.3	0.0	0.4	0.3	0.0	0.1	0.0	0.1
Other (EWO)	0.4	0.2	0.2	0.3	0.2	1.3	0.6	0.0	0.2	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	15,318	33,399	7,394	7,760	5,222	928	9,172	7,703	5,144	5,394	48,717
Eligible women response rate (EWRR)[2]	97.5	98.5	99.4	98.1	98.1	97.8	96.7	99.7	97.6	98.0	98.2
Overall response rate (ORR)[3]	95.4	97.9	98.8	97.1	97.4	97.4	94.3	99.5	95.7	97.5	97.1

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + P + HP + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR/100$$

ESTIMATES OF SAMPLING ERRORS *Appendix* B

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the Afghan Mortality Survey 2010 (AMS 2010) to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the AMS 2010 is only one of many samples that could have been selected from the same population, using the same design and identical size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the AMS 2010 sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the AMS 2010 is a SAS program. This program used the Taylor linearization method for variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1}{x^2} \sum_{h=1}^{H} \left[(1 - f_h) \frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi} \text{, and } \quad z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,

m_h is the total number of clusters selected in the h^{th} stratum,
y_{hi} is the sum of the weighted values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the weighted number of cases in the i^{th} cluster in the h^{th} stratum, and
f_h is the sampling fraction of PSU in the h^{th} stratum which is usually ignored

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the AMS 2010, there were 717 non-empty clusters. Hence, 717 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 717 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 716 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the program computes also the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design, such as multistage and cluster selection. The program also computes the relative standard error and the confidence limits for the estimates.

Sampling errors for the AMS 2010 are calculated for selected variables considered to be of primary interest. The results are presented in this appendix are for the country as a whole, for urban and rural areas, for each of the three study domains, and for each of 8 geographical regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.15 present the value of the statistic (R), its standard error (SE), the number of unweighted (N-UNWE) and weighted (N-WEIG) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for *children ever born to women age 40-49*) can be interpreted as follows: the overall average from the national sample is 6.900 and its standard error is 0.053. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 6.900±2×0.053. There is a high probability (95 percent) that the *true* average number of children ever born to all women over age 40 is between 6.794 and 7.007.

For the total sample, the value of the design effect (DEFT), averaged over all variables for the women survey, is 2.1 which means that, due to multistage and clustering of the sample, the average standard error is increased by a factor of 2.1 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Afghanistan 2010

Variable	Estimate	Base population
Urban residence	Proportion	All women 12-49
No education	Proportion	All women 12-49
Secondary education	Proportion	All women 12-49
Higher education	Proportion	All women 12-49
Never married	Proportion	All women 12-49
Currently married	Proportion	All women 12-49
Married before age 20	Proportion	All women 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 12-49
Children surviving	Mean	All women 12-49
Children ever born to women age 40-49	Mean	All women 40-49
Know any contraceptive method	Proportion	Currently married women 12-49
Know a modern method	Proportion	Currently married women 12-49
Currently using any method	Proportion	Currently married women 12-49
Currently using a modern method	Proportion	Currently married women 12-49
Currently using a traditional method	Proportion	Currently married women 12-49
Currently using female sterilization	Proportion	Currently married women 12-49
Currently using pill	Proportion	Currently married women 12-49
Currently using IUD	Proportion	Currently married women 12-49
Currently using injectables	Proportion	Currently married women 12-49
Currently using condoms	Proportion	Currently married women 12-49
Currently using LAM	Proportion	Currently married women 12-49
Currently using withdrawal	Proportion	Currently married women 12-49
Currently using rhythm	Proportion	Currently married women 12-49
Mothers protected against tetanus for last birth	Proportion	Women with birth occurring 1-59 months before survey for most recent birth
Antenatal care from skilled provider	Proportion	Women with birth occurring 1-59 months before survey for most recent birth
Postnatal care from skilled provider	Proportion	Women with birth occurring 1-59 months before survey for most recent birth
Births with skilled attendant at delivery	Proportion	Women with birth occurring 1-59 months before survey for most recent birth
Total fertility rate (3 years)	Rate	Women-years of exposure to childbearing for women 15-49
Neonatal mortality rate	Rate	Children exposed to the risk of mortality
Post-neonatal mortality rate	Rate	Children exposed to the risk of mortality
Infant mortality rate	Rate	Children exposed to the risk of mortality
Child mortality rate	Rate	Children exposed to the risk of mortality
Under-5 mortality rate	Rate	Children exposed to the risk of mortality

Table B.2 Sampling errors for National sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.203	0.006	47848	47848	3.015	0.027	0.192	0.214
No education	0.762	0.007	47848	47848	3.586	0.009	0.748	0.776
Secondary education	0.096	0.004	47848	47848	2.871	0.040	0.088	0.104
Higher education	0.012	0.001	47848	47848	1.846	0.077	0.010	0.014
Never married/in union	0.446	0.004	47848	47848	1.563	0.008	0.439	0.453
Currently married/in union	0.539	0.003	47848	47848	1.531	0.006	0.532	0.546
Married before age 20	0.672	0.005	28236	27970	1.922	0.008	0.662	0.683
Currently pregnant	0.121	0.003	39569	39466	1.640	0.022	0.116	0.126
Children ever born	4.270	0.028	25834	25777	1.532	0.007	4.214	4.327
Children surviving	3.909	0.026	25834	25777	1.524	0.007	3.858	3.960
Children ever born to women age 40-49	6.900	0.053	5808	5818	1.443	0.008	6.794	7.007
Knows any contraceptive method	0.918	0.006	25796	25738	3.638	0.007	0.906	0.931
Knows a modern method	0.916	0.006	25796	25738	3.637	0.007	0.904	0.929
Currently using any method	0.218	0.006	25796	25738	2.231	0.026	0.207	0.230
Currently using a modern method	0.199	0.006	25796	25738	2.229	0.028	0.188	0.210
Currently using a traditional method	0.019	0.001	25796	25738	1.498	0.066	0.017	0.022
Currently using female sterilization	0.014	0.001	25796	25738	1.436	0.076	0.012	0.016
Currently using pill	0.053	0.002	25796	25738	1.749	0.046	0.048	0.058
Currently using IUD	0.013	0.001	25796	25738	1.388	0.075	0.011	0.015
Currently using condoms	0.017	0.001	25796	25738	1.333	0.063	0.015	0.019
Currently use LAM	0.036	0.003	25796	25738	2.196	0.071	0.031	0.041
Currently using withdrawal	0.014	0.001	25796	25738	1.497	0.079	0.012	0.016
Antenatal care from skilled provider	0.596	0.009	17121	16998	2.326	0.015	0.579	0.614
Mothers protected against tetanus for last birth	0.586	0.009	17121	16998	2.312	0.015	0.569	0.604
Births with skilled attendant at delivery	0.343	0.008	17121	16998	2.305	0.024	0.327	0.360
Postnatal care from skilled provider	0.277	0.007	17121	16998	2.188	0.027	0.262	0.292
Total fertility rate (past 3 years)	5.117	0.078	106892	106300	1.973	0.015	4.962	5.273
Neonatal mortality (past 0-4 years)	25.178	1.229	29694	29470	1.190	0.049	22.721	27.636
Post-neonatal mortality (past 0-4 years)	29.491	1.376	29868	29665	1.285	0.047	26.740	32.242
Infant mortality (past 0-4 years)	54.669	1.925	29764	29545	1.263	0.035	50.819	58.519
Child mortality (past 0-4 years)	17.490	1.019	30486	30401	1.311	0.058	15.453	19.527
Under-5 mortality (past 0-4 years)	71.203	2.250	29956	29738	1.313	0.032	66.703	75.704
Total sample excluding the South zone								
Neonatal mortality (past 0-4 years)	28.648	1.645	18365	19363	1.184	0.057	25.358	31.937
Post-neonatal mortality (past 0-4 years)	35.825	1.774	18475	19509	1.238	0.050	32.276	39.374
Infant mortality (past 0-4 years)	64.473	2.463	18425	19430	1.221	0.038	59.547	69.399
Child mortality (past 0-4 years)	19.725	1.397	18664	19759	1.357	0.071	16.931	22.519
Under-5 mortality (past 0-4 years)	82.926	2.919	18561	19581	1.297	0.035	77.088	88.765

Table B.3 Sampling errors for Urban sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	1.000	0.000	14936	9696	na	0.000	1.000	1.000
No education	0.500	0.012	14936	9696	2.979	0.024	0.475	0.524
Secondary education	0.251	0.010	14936	9696	2.704	0.038	0.232	0.271
Higher education	0.044	0.003	14936	9696	1.958	0.074	0.038	0.051
Never married/in union	0.474	0.005	14936	9696	1.204	0.010	0.464	0.484
Currently married/in union	0.509	0.005	14936	9696	1.213	0.010	0.500	0.519
Married before age 20	0.607	0.010	8890	5791	1.934	0.016	0.587	0.627
Currently pregnant	0.095	0.003	12531	8172	1.273	0.035	0.088	0.102
Children ever born	4.300	0.049	7658	4938	1.454	0.011	4.202	4.399
Children surviving	3.973	0.042	7658	4938	1.372	0.011	3.888	4.057
Children ever born to women age 40-49	6.829	0.107	1766	1138	1.515	0.016	6.615	7.042
Knows any contraceptive method	0.976	0.005	7649	4932	2.596	0.005	0.967	0.985
Knows a modern method	0.974	0.005	7649	4932	2.703	0.005	0.964	0.984
Currently using any method	0.364	0.012	7649	4932	2.202	0.033	0.339	0.388
Currently using a modern method	0.312	0.011	7649	4932	2.061	0.035	0.290	0.334
Currently using a traditional method	0.052	0.004	7649	4932	1.693	0.083	0.043	0.060
Currently using female sterilization	0.024	0.002	7649	4932	1.238	0.089	0.020	0.029
Currently using pill	0.077	0.005	7649	4932	1.581	0.062	0.068	0.087
Currently using IUD	0.034	0.003	7649	4932	1.452	0.088	0.028	0.040
Currently using condoms	0.054	0.004	7649	4932	1.521	0.073	0.046	0.062
Currently use LAM	0.039	0.004	7649	4932	1.843	0.105	0.031	0.047
Currently using withdrawal	0.043	0.004	7649	4932	1.716	0.092	0.035	0.051
Antenatal care from skilled provider	0.849	0.009	5072	3245	1.848	0.011	0.830	0.868
Mothers protected against tetanus for last birth	0.651	0.012	5072	3245	1.864	0.019	0.627	0.676
Births with skilled attendant at delivery	0.709	0.013	5072	3245	2.095	0.019	0.682	0.735
Postnatal care from skilled provider	0.459	0.014	5072	3245	1.957	0.030	0.431	0.486
Total fertility rate (past 3 years)	4.720	0.101	33797	22052	1.465	0.021	4.517	4.922
Neonatal mortality (past 0-4 years)	21.865	1.880	8714	5569	1.087	0.086	18.104	25.625
Post-neonatal mortality (past 0-4 years)	21.345	1.753	8792	5626	1.088	0.082	17.838	24.851
Infant mortality (past 0-4 years)	43.209	2.626	8725	5576	1.101	0.061	37.958	48.461
Child mortality (past 0-4 years)	11.329	1.268	8751	5592	1.047	0.112	8.793	13.864
Under-5 mortality (past 0-4 years)	54.048	2.976	8768	5600	1.139	0.055	48.096	60.001
Urban sample excluding the South zone								
Neonatal mortality (past 0-4 years)	23.515	2.170	6610	4541	1.052	0.092	19.175	27.855
Post-neonatal mortality (past 0-4 years)	23.657	2.057	6655	4581	1.071	0.087	19.544	27.771
Infant mortality (past 0-4 years)	47.172	3.000	6620	4548	1.065	0.064	41.172	53.172
Child mortality (past 0-4 years)	10.321	1.361	6639	4562	1.025	0.132	7.599	13.044
Under-5 mortality (past 0-4 years)	57.007	3.426	6652	4568	1.110	0.060	50.154	63.859

na = Not applicable

Table B.4 Sampling errors for Rural sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.000	0.000	32912	38152	na	na	0.000	0.000
No education	0.829	0.008	32912	38152	3.661	0.009	0.814	0.844
Secondary education	0.056	0.004	32912	38152	3.007	0.068	0.049	0.064
Higher education	0.004	0.001	32912	38152	2.259	0.207	0.002	0.005
Never married/in union	0.439	0.004	32912	38152	1.572	0.010	0.431	0.448
Currently married/in union	0.546	0.004	32912	38152	1.536	0.008	0.538	0.555
Married before age 20	0.689	0.006	19346	22179	1.870	0.009	0.677	0.702
Currently pregnant	0.128	0.003	27038	31294	1.610	0.026	0.121	0.134
Children ever born	4.263	0.033	18176	20838	1.498	0.008	4.197	4.329
Children surviving	3.894	0.030	18176	20838	1.498	0.008	3.833	3.954
Children ever born to women age 40-49	6.918	0.061	4042	4680	1.396	0.009	6.796	7.040
Knows any contraceptive method	0.904	0.008	18147	20806	3.465	0.008	0.889	0.920
Knows a modern method	0.903	0.008	18147	20806	3.465	0.008	0.888	0.918
Currently using any method	0.184	0.006	18147	20806	2.233	0.035	0.171	0.197
Currently using a modern method	0.172	0.006	18147	20806	2.249	0.037	0.160	0.185
Currently using a traditional method	0.012	0.001	18147	20806	1.509	0.103	0.009	0.014
Currently using female sterilization	0.011	0.001	18147	20806	1.513	0.106	0.009	0.014
Currently using pill	0.048	0.003	18147	20806	1.767	0.059	0.042	0.053
Currently using IUD	0.008	0.001	18147	20806	1.476	0.120	0.006	0.010
Currently using condoms	0.008	0.001	18147	20806	1.343	0.109	0.006	0.010
Currently use LAM	0.035	0.003	18147	20806	2.192	0.086	0.029	0.041
Currently using withdrawal	0.007	0.001	18147	20806	1.529	0.137	0.005	0.009
Antenatal care from skilled provider	0.536	0.010	12049	13753	2.270	0.019	0.516	0.557
Mothers protected against tetanus for last birth	0.571	0.010	12049	13753	2.291	0.018	0.550	0.592
Births with skilled attendant at delivery	0.257	0.009	12049	13753	2.355	0.036	0.239	0.276
Postnatal care from skilled provider	0.234	0.009	12049	13753	2.211	0.036	0.217	0.251
Total fertility rate (past 3 years)	5.219	0.094	73095	84248	1.984	0.018	5.031	5.408
Neonatal mortality (past 0-4 years)	25.953	1.449	20980	23901	1.154	0.056	23.054	28.851
Post-neonatal mortality (past 0-4 years)	31.368	1.632	21076	24039	1.235	0.052	28.104	34.632
Infant mortality (past 0-4 years)	57.321	2.275	21039	23969	1.218	0.040	52.772	61.870
Child mortality (past 0-4 years)	18.871	1.208	21735	24810	1.264	0.064	16.454	21.287
Under-5 mortality (past 0-4 years)	75.110	2.650	21188	24138	1.264	0.035	69.810	80.409
Rural sample excluding the South zone								
Neonatal mortality (past 0-4 years)	30.223	2.036	11755	14822	1.133	0.067	26.152	34.295
Post-neonatal mortality (past 0-4 years)	39.523	2.181	11820	14927	1.163	0.055	35.162	43.885
Infant mortality (past 0-4 years)	69.747	3.010	11805	14882	1.152	0.043	63.727	75.766
Child mortality (past 0-4 years)	22.556	1.736	12025	15197	1.275	0.077	19.085	26.027
Under-5 mortality (past 0-4 years)	90.730	3.523	11909	15014	1.216	0.039	83.683	97.776

na = Not applicable

Table B.5 Sampling errors for North sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.168	0.008	14960	14214	2.763	0.050	0.151	0.184
No education	0.750	0.012	14960	14214	3.439	0.016	0.725	0.774
Secondary education	0.110	0.007	14960	14214	2.841	0.066	0.096	0.125
Higher education	0.012	0.002	14960	14214	2.289	0.173	0.008	0.016
Never married/in union	0.433	0.006	14960	14214	1.571	0.015	0.421	0.446
Currently married/in union	0.548	0.006	14960	14214	1.572	0.012	0.536	0.561
Married before age 20	0.704	0.008	9131	8635	1.722	0.012	0.687	0.720
Currently pregnant	0.123	0.004	12529	11885	1.448	0.035	0.115	0.132
Children ever born	4.326	0.046	8173	7794	1.368	0.011	4.234	4.417
Children surviving	3.797	0.040	8173	7794	1.354	0.010	3.717	3.876
Children ever born to women age 40-49	7.042	0.088	1869	1799	1.315	0.013	6.866	7.218
Knows any contraceptive method	0.937	0.009	8161	7781	3.236	0.009	0.920	0.955
Knows a modern method	0.936	0.009	8161	7781	3.200	0.009	0.919	0.954
Currently using any method	0.148	0.009	8161	7781	2.234	0.059	0.131	0.166
Currently using a modern method	0.132	0.008	8161	7781	2.199	0.063	0.115	0.148
Currently using a traditional method	0.016	0.002	8161	7781	1.496	0.128	0.012	0.021
Currently using female sterilization	0.008	0.001	8161	7781	1.441	0.177	0.005	0.011
Currently using pill	0.035	0.003	8161	7781	1.504	0.088	0.029	0.041
Currently using IUD	0.006	0.001	8161	7781	1.253	0.181	0.004	0.008
Currently using condoms	0.010	0.002	8161	7781	1.505	0.166	0.007	0.013
Currently use LAM	0.012	0.002	8161	7781	1.357	0.136	0.009	0.015
Currently using withdrawal	0.013	0.002	8161	7781	1.527	0.146	0.009	0.017
Antenatal care from skilled provider	0.648	0.014	5603	5346	2.207	0.022	0.620	0.677
Mothers protected against tetanus for last birth	0.663	0.013	5603	5346	2.087	0.020	0.637	0.689
Births with skilled attendant at delivery	0.270	0.013	5603	5346	2.234	0.049	0.243	0.296
Postnatal care from skilled provider	0.228	0.012	5603	5346	2.074	0.051	0.205	0.251
Total fertility rate (past 3 years)	5.019	0.114	33977	32207	1.649	0.023	4.791	5.247
Neonatal mortality (past 0-4 years)	29.702	2.396	9478	8968	1.215	0.081	24.910	34.494
Post-neonatal mortality (past 0-4 years)	38.811	2.538	9510	9008	1.246	0.065	33.736	43.886
Infant mortality (past 0-4 years)	68.513	3.612	9514	9005	1.267	0.053	61.290	75.736
Child mortality (past 0-4 years)	19.090	1.661	9717	9239	1.172	0.087	15.768	22.413
Under-5 mortality (past 0-4 years)	86.295	4.004	9589	9074	1.278	0.046	78.287	94.304

Table B.6 Sampling errors for Central sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.335	0.011	14902	17034	2.941	0.034	0.313	0.358
No education	0.667	0.013	14902	17034	3.303	0.019	0.641	0.692
Secondary education	0.141	0.008	14902	17034	2.796	0.057	0.125	0.157
Higher education	0.019	0.002	14902	17034	1.572	0.093	0.015	0.022
Never married/in union	0.448	0.006	14902	17034	1.589	0.014	0.435	0.461
Currently married/in union	0.536	0.006	14902	17034	1.516	0.012	0.523	0.548
Married before age 20	0.685	0.009	8736	9901	1.829	0.013	0.667	0.703
Currently pregnant	0.111	0.005	12407	14153	1.633	0.041	0.102	0.121
Children ever born	4.351	0.048	7876	9124	1.437	0.011	4.255	4.446
Children surviving	3.935	0.043	7876	9124	1.461	0.011	3.848	4.021
Children ever born to women age 40-49	6.865	0.095	1776	2034	1.374	0.014	6.674	7.055
Knows any contraceptive method	0.960	0.008	7864	9110	3.434	0.008	0.944	0.975
Knows a modern method	0.958	0.008	7864	9110	3.400	0.008	0.942	0.973
Currently using any method	0.336	0.011	7864	9110	2.052	0.033	0.314	0.358
Currently using a modern method	0.305	0.011	7864	9110	2.070	0.035	0.284	0.327
Currently using a traditional method	0.030	0.003	7864	9110	1.376	0.088	0.025	0.036
Currently using female sterilization	0.026	0.002	7864	9110	1.328	0.093	0.021	0.030
Currently using pill	0.081	0.006	7864	9110	1.800	0.068	0.070	0.093
Currently using IUD	0.022	0.002	7864	9110	1.228	0.093	0.018	0.026
Currently using condoms	0.029	0.002	7864	9110	1.252	0.081	0.024	0.034
Currently use LAM	0.065	0.006	7864	9110	2.028	0.087	0.053	0.076
Currently using withdrawal	0.023	0.002	7864	9110	1.446	0.105	0.019	0.028
Antenatal care from skilled provider	0.620	0.014	5138	5965	2.059	0.022	0.593	0.648
Mothers protected against tetanus for last birth	0.565	0.016	5138	5965	2.300	0.028	0.533	0.597
Births with skilled attendant at delivery	0.403	0.015	5138	5965	2.158	0.037	0.373	0.432
Postnatal care from skilled provider	0.284	0.013	5138	5965	2.066	0.046	0.258	0.310
Total fertility rate (past 3 years)	4.987	0.132	33376	37957	1.839	0.026	4.724	5.251
Neonatal mortality (past 0-4 years)	27.741	2.270	8887	10395	1.158	0.082	23.202	32.280
Post-neonatal mortality (past 0-4 years)	33.270	2.499	8965	10501	1.243	0.075	28.272	38.268
Infant mortality (past 0-4 years)	61.011	3.388	8911	10425	1.190	0.056	54.235	67.787
Child mortality (past 0-4 years)	20.288	2.186	8947	10520	1.452	0.108	15.916	24.661
Under-5 mortality (past 0-4 years)	80.062	4.253	8972	10507	1.318	0.053	71.555	88.568

Table B.7 Sampling errors for South sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.097	0.006	17986	16599	2.803	0.064	0.084	0.109
No education	0.872	0.009	17986	16599	3.760	0.011	0.853	0.890
Secondary education	0.037	0.003	17986	16599	2.477	0.094	0.030	0.044
Higher education	0.005	0.001	17986	16599	1.604	0.168	0.003	0.007
Never married/in union	0.456	0.006	17986	16599	1.504	0.012	0.445	0.467
Currently married/in union	0.534	0.006	17986	16599	1.504	0.010	0.523	0.545
Married before age 20	0.630	0.010	10369	9433	2.153	0.016	0.609	0.650
Currently pregnant	0.129	0.005	14633	13429	1.785	0.038	0.119	0.139
Children ever born	4.139	0.051	9785	8858	1.722	0.012	4.037	4.241
Children surviving	3.981	0.049	9785	8858	1.716	0.012	3.883	4.079
Children ever born to women age 40-49	6.809	0.091	2163	1986	1.630	0.013	6.626	6.991
Knows any contraceptive method	0.859	0.014	9771	8847	3.921	0.016	0.831	0.886
Knows a modern method	0.856	0.014	9771	8847	3.942	0.016	0.828	0.884
Currently using any method	0.160	0.008	9771	8847	2.240	0.052	0.143	0.176
Currently using a modern method	0.149	0.008	9771	8847	2.211	0.053	0.133	0.165
Currently using a traditional method	0.011	0.002	9771	8847	1.666	0.163	0.007	0.014
Currently using female sterilization	0.007	0.001	9771	8847	1.363	0.170	0.004	0.009
Currently using pill	0.041	0.003	9771	8847	1.543	0.076	0.035	0.047
Currently using IUD	0.011	0.002	9771	8847	1.693	0.162	0.007	0.015
Currently using condoms	0.011	0.001	9771	8847	1.326	0.129	0.008	0.013
Currently use LAM	0.026	0.004	9771	8847	2.292	0.141	0.019	0.034
Currently using withdrawal	0.004	0.001	9771	8847	1.142	0.177	0.003	0.006
Antenatal care from skilled provider	0.522	0.016	6380	5687	2.603	0.031	0.489	0.554
Mothers protected against tetanus for last birth	0.537	0.015	6380	5687	2.460	0.029	0.506	0.567
Births with skilled attendant at delivery	0.351	0.016	6380	5687	2.615	0.045	0.319	0.382
Postnatal care from skilled provider	0.316	0.014	6380	5687	2.384	0.044	0.288	0.344
Total fertility rate (past 3 years)	5.348	0.153	39539	36136	2.324	0.029	5.041	5.655
Neonatal mortality (past 0-4 years)	18.529	1.586	11329	10107	1.136	0.086	15.358	21.701
Post-neonatal mortality (past 0-4 years)	17.605	1.781	11393	10157	1.359	0.101	14.043	21.167
Infant mortality (past 0-4 years)	36.134	2.421	11339	10115	1.284	0.067	31.292	40.976
Child mortality (past 0-4 years)	13.482	1.218	11822	10642	1.080	0.090	11.046	15.918
Under-5 mortality (past 0-4 years)	49.129	2.455	11395	10157	1.156	0.050	44.218	54.040

Table B.8 Sampling errors for North Eastern sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.133	0.010	7351	6776	2.576	0.077	0.112	0.153
No education	0.744	0.016	7351	6776	3.236	0.022	0.711	0.777
Secondary education	0.121	0.011	7351	6776	2.824	0.089	0.100	0.143
Higher education	0.011	0.004	7351	6776	2.915	0.316	0.004	0.019
Never married/in union	0.417	0.009	7351	6776	1.616	0.022	0.399	0.436
Currently married/in union	0.565	0.010	7351	6776	1.651	0.017	0.546	0.584
Married before age 20	0.742	0.011	4485	4122	1.646	0.015	0.720	0.763
Currently pregnant	0.131	0.006	6132	5649	1.500	0.049	0.118	0.144
Children ever born	4.393	0.063	4155	3827	1.342	0.014	4.266	4.519
Children surviving	3.899	0.054	4155	3827	1.280	0.014	3.792	4.007
Children ever born to women age 40-49	7.214	0.106	916	863	1.162	0.015	7.003	7.425
Knows any contraceptive method	0.912	0.015	4152	3823	3.388	0.016	0.883	0.942
Knows a modern method	0.912	0.015	4152	3823	3.380	0.016	0.882	0.942
Currently using any method	0.146	0.014	4152	3823	2.606	0.098	0.117	0.174
Currently using a modern method	0.141	0.014	4152	3823	2.634	0.101	0.113	0.170
Currently using a traditional method	0.004	0.001	4152	3823	1.021	0.238	0.002	0.007
Currently using female sterilization	0.004	0.001	4152	3823	1.014	0.253	0.002	0.006
Currently using pill	0.036	0.005	4152	3823	1.677	0.135	0.026	0.046
Currently using IUD	0.004	0.001	4152	3823	1.331	0.317	0.002	0.007
Currently using condoms	0.005	0.001	4152	3823	1.277	0.273	0.002	0.008
Currently use LAM	0.011	0.002	4152	3823	1.524	0.229	0.006	0.015
Currently using withdrawal	0.002	0.001	4152	3823	0.863	0.268	0.001	0.004
Antenatal care from skilled provider	0.578	0.018	2855	2612	1.976	0.032	0.542	0.615
Mothers protected against tetanus for last birth	0.659	0.018	2855	2612	2.069	0.028	0.622	0.696
Births with skilled attendant at delivery	0.234	0.018	2855	2612	2.233	0.076	0.198	0.269
Postnatal care from skilled provider	0.186	0.016	2855	2612	2.221	0.087	0.154	0.218
Total fertility rate (past 3 years)	5.111	0.179	16614	15298	1.809	0.035	4.753	5.469
Neonatal mortality (past 0-4 years)	30.525	3.271	4951	4494	1.135	0.107	23.982	37.068
Post-neonatal mortality (past 0-4 years)	35.905	3.087	4947	4491	1.116	0.086	29.732	42.078
Infant mortality (past 0-4 years)	66.430	4.708	4964	4507	1.134	0.071	57.013	75.846
Child mortality (past 0-4 years)	18.853	2.301	5067	4644	1.193	0.122	14.250	23.456
Under-5 mortality (past 0-4 years)	84.031	5.230	5002	4541	1.128	0.062	73.571	94.490

Table B.9 Sampling errors for Northern sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.199	0.013	7609	7438	2.866	0.066	0.173	0.225
No education	0.754	0.018	7609	7438	3.551	0.023	0.719	0.789
Secondary education	0.100	0.010	7609	7438	2.795	0.096	0.081	0.120
Higher education	0.012	0.002	7609	7438	1.554	0.164	0.008	0.015
Never married/in union	0.448	0.009	7609	7438	1.532	0.020	0.430	0.465
Currently married/in union	0.534	0.009	7609	7438	1.501	0.016	0.517	0.551
Married before age 20	0.669	0.012	4646	4513	1.759	0.018	0.645	0.693
Currently pregnant	0.116	0.006	6397	6236	1.406	0.049	0.105	0.127
Children ever born	4.261	0.067	4018	3967	1.400	0.016	4.128	4.395
Children surviving	3.697	0.058	4018	3967	1.430	0.016	3.581	3.814
Children ever born to women age 40-49	6.883	0.140	953	936	1.427	0.020	6.604	7.162
Knows any contraceptive method	0.961	0.009	4009	3958	2.965	0.009	0.943	0.979
Knows a modern method	0.960	0.009	4009	3958	2.882	0.009	0.942	0.978
Currently using any method	0.150	0.010	4009	3958	1.845	0.069	0.130	0.171
Currently using a modern method	0.122	0.009	4009	3958	1.650	0.070	0.105	0.139
Currently using a traditional method	0.028	0.004	4009	3958	1.467	0.137	0.020	0.036
Currently using female sterilization	0.012	0.003	4009	3958	1.507	0.216	0.007	0.017
Currently using pill	0.033	0.004	4009	3958	1.307	0.111	0.026	0.041
Currently using IUD	0.007	0.002	4009	3958	1.197	0.219	0.004	0.011
Currently using condoms	0.015	0.003	4009	3958	1.520	0.198	0.009	0.020
Currently use LAM	0.013	0.002	4009	3958	1.213	0.164	0.009	0.018
Currently using withdrawal	0.023	0.004	4009	3958	1.486	0.151	0.016	0.031
Antenatal care from skilled provider	0.715	0.022	2748	2734	2.548	0.031	0.671	0.759
Mothers protected against tetanus for last birth	0.666	0.019	2748	2734	2.101	0.028	0.629	0.704
Births with skilled attendant at delivery	0.304	0.020	2748	2734	2.279	0.066	0.264	0.344
Postnatal care from skilled provider	0.268	0.017	2748	2734	2.017	0.064	0.234	0.302
Total fertility rate (past 3 years)	4.923	0.146	17364	16909	1.520	0.030	4.631	5.214
Neonatal mortality (past 0-4 years)	28.879	3.553	4527	4474	1.294	0.123	21.774	35.984
Post-neonatal mortality (past 0-4 years)	41.749	4.048	4563	4517	1.336	0.097	33.654	49.844
Infant mortality (past 0-4 years)	70.628	5.491	4550	4498	1.367	0.078	59.646	81.610
Child mortality (past 0-4 years)	19.366	2.423	4650	4595	1.152	0.125	14.520	24.213
Under-5 mortality (past 0-4 years)	88.626	6.085	4587	4533	1.397	0.069	76.456	100.797

Table B.10 Sampling errors for Western sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	R+2SE
Urban	0.163	0.017	5125	5990	3.246	0.103	0.129	0.196
No education	0.753	0.019	5125	5990	3.117	0.025	0.715	0.790
Secondary education	0.086	0.010	5125	5990	2.582	0.118	0.066	0.106
Higher education	0.008	0.002	5125	5990	1.794	0.277	0.004	0.013
Never married/in union	0.411	0.013	5125	5990	1.883	0.031	0.385	0.437
Currently married/in union	0.570	0.012	5125	5990	1.780	0.022	0.545	0.595
Married before age 20	0.793	0.014	2950	3412	1.866	0.018	0.765	0.821
Currently pregnant	0.131	0.009	4199	4887	1.643	0.065	0.113	0.148
Children ever born	4.036	0.079	2888	3414	1.488	0.020	3.877	4.195
Children surviving	3.631	0.068	2888	3414	1.438	0.019	3.495	3.767
Children ever born to women age 40-49	6.816	0.194	597	683	1.603	0.028	6.428	7.204
Knows any contraceptive method	0.973	0.006	2882	3404	1.875	0.006	0.961	0.984
Knows a modern method	0.971	0.006	2882	3404	1.870	0.006	0.959	0.982
Currently using any method	0.330	0.019	2882	3404	2.138	0.057	0.293	0.368
Currently using a modern method	0.297	0.019	2882	3404	2.189	0.063	0.259	0.334
Currently using a traditional method	0.034	0.005	2882	3404	1.469	0.146	0.024	0.044
Currently using female sterilization	0.024	0.003	2882	3404	1.226	0.146	0.017	0.031
Currently using pill	0.079	0.008	2882	3404	1.567	0.099	0.064	0.095
Currently using IUD	0.016	0.003	2882	3404	1.324	0.194	0.010	0.022
Currently using condoms	0.022	0.004	2882	3404	1.391	0.173	0.014	0.030
Currently use LAM	0.082	0.009	2882	3404	1.720	0.108	0.064	0.099
Currently using withdrawal	0.024	0.005	2882	3404	1.686	0.202	0.014	0.033
Antenatal care from skilled provider	0.417	0.027	1900	2269	2.343	0.064	0.364	0.470
Mothers protected against tetanus for last birth	0.440	0.026	1900	2269	2.247	0.058	0.389	0.491
Births with skilled attendant at delivery	0.233	0.019	1900	2269	1.967	0.082	0.195	0.272
Postnatal care from skilled provider	0.204	0.017	1900	2269	1.846	0.084	0.169	0.238
Total fertility rate (past 3 years)	4.915	0.162	11265	13068	1.710	0.033	4.590	5.239
Neonatal mortality (past 0-4 years)	35.526	4.145	3086	3737	1.149	0.117	27.236	43.816
Post-neonatal mortality (past 0-4 years)	38.998	4.249	3121	3781	1.138	0.109	30.501	47.496
Infant mortality (past 0-4 years)	74.524	5.174	3097	3749	1.022	0.069	64.176	84.873
Child mortality (past 0-4 years)	25.331	2.945	3111	3793	1.094	0.116	19.442	31.220
Under-5 mortality (past 0-4 years)	97.967	5.644	3123	3780	0.993	0.058	86.679	109.255

Table B.11 Sampling errors for Central Highlands sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.000	0.000	908	1647	na	na	0.000	0.000
No education	0.630	0.028	908	1647	1.765	0.045	0.574	0.687
Secondary education	0.057	0.016	908	1647	2.132	0.289	0.024	0.090
Higher education	0.001	0.001	908	1647	0.735	0.633	0.000	0.003
Never married/in union	0.439	0.020	908	1647	1.212	0.045	0.399	0.479
Currently married/in union	0.557	0.020	908	1647	1.238	0.037	0.516	0.597
Married before age 20	0.841	0.023	482	865	1.360	0.027	0.796	0.887
Currently pregnant	0.124	0.024	727	1316	1.948	0.192	0.076	0.172
Children ever born	4.422	0.129	499	917	0.997	0.029	4.164	4.680
Children surviving	3.911	0.112	499	917	0.975	0.029	3.687	4.134
Children ever born to women age 40-49	7.466	0.239	100	179	0.931	0.032	6.989	7.944
Knows any contraceptive method	0.950	0.015	498	915	1.579	0.016	0.919	0.981
Knows a modern method	0.950	0.015	498	915	1.579	0.016	0.919	0.981
Currently using any method	0.356	0.048	498	915	2.229	0.135	0.260	0.452
Currently using a modern method	0.354	0.049	498	915	2.257	0.137	0.256	0.451
Currently using a traditional method	0.002	0.002	498	915	1.063	1.018	0.000	0.007
Currently using female sterilization	0.008	0.004	498	915	1.006	0.516	0.000	0.015
Currently using pill	0.174	0.032	498	915	1.867	0.183	0.110	0.238
Currently using IUD	0.010	0.005	498	915	1.119	0.509	0.000	0.019
Currently using condoms	0.006	0.004	498	915	1.135	0.672	0.000	0.013
Currently use LAM	0.004	0.003	498	915	1.004	0.670	0.000	0.011
Currently using withdrawal	0.000	0.000	498	915	na	na	0.000	0.000
Antenatal care from skilled provider	0.500	0.040	324	557	1.430	0.080	0.421	0.580
Mothers protected against tetanus for last birth	0.597	0.062	324	557	2.248	0.103	0.473	0.720
Births with skilled attendant at delivery	0.115	0.024	324	557	1.336	0.206	0.068	0.163
Postnatal care from skilled provider	0.208	0.035	324	557	1.535	0.167	0.139	0.278
Total fertility rate (past 3 years)	4.632	0.801	1886	3384	2.563	0.173	3.029	6.234
Neonatal mortality (past 0-4 years)	38.429	9.718	542	893	1.070	0.253	18.994	57.865
Post-neonatal mortality (past 0-4 years)	35.281	7.565	541	892	0.881	0.214	20.152	50.410
Infant mortality (past 0-4 years)	73.710	10.117	542	893	0.794	0.137	53.477	93.944
Child mortality (past 0-4 years)	17.025	4.775	573	951	0.930	0.280	7.474	26.575
Under-5 mortality (past 0-4 years)	89.480	12.416	548	901	0.894	0.139	64.649	114.312

na = Not applicable

Table B.12 Sampling errors for Capital sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	R+2SE
Urban	0.504	0.019	8869	9397	3.631	0.038	0.465	0.542
No education	0.618	0.020	8869	9397	3.823	0.032	0.579	0.658
Secondary education	0.191	0.013	8869	9397	3.063	0.067	0.165	0.216
Higher education	0.028	0.003	8869	9397	1.630	0.101	0.023	0.034
Never married/in union	0.473	0.008	8869	9397	1.440	0.016	0.457	0.488
Currently married/in union	0.510	0.007	8869	9397	1.351	0.014	0.496	0.525
Married before age 20	0.596	0.012	5304	5624	1.854	0.021	0.571	0.621
Currently pregnant	0.098	0.005	7481	7949	1.397	0.049	0.088	0.107
Children ever born	4.562	0.065	4489	4794	1.446	0.014	4.432	4.691
Children surviving	4.156	0.061	4489	4794	1.529	0.015	4.034	4.278
Children ever born to women age 40-49	6.801	0.114	1079	1172	1.267	0.017	6.574	7.029
Knows any contraceptive method	0.952	0.014	4484	4790	4.257	0.014	0.925	0.980
Knows a modern method	0.950	0.014	4484	4790	4.209	0.014	0.923	0.978
Currently using any method	0.336	0.012	4484	4790	1.688	0.035	0.312	0.360
Currently using a modern method	0.302	0.012	4484	4790	1.678	0.038	0.279	0.325
Currently using a traditional method	0.034	0.004	4484	4790	1.336	0.107	0.026	0.041
Currently using female sterilization	0.030	0.004	4484	4790	1.396	0.119	0.023	0.037
Currently using pill	0.065	0.006	4484	4790	1.495	0.084	0.054	0.076
Currently using IUD	0.028	0.003	4484	4790	1.214	0.106	0.022	0.034
Currently using condoms	0.039	0.004	4484	4790	1.266	0.094	0.032	0.046
Currently use LAM	0.064	0.008	4484	4790	2.296	0.131	0.047	0.081
Currently using withdrawal	0.028	0.003	4484	4790	1.317	0.116	0.021	0.034
Antenatal care from skilled provider	0.789	0.012	2914	3139	1.549	0.015	0.766	0.812
Mothers protected against tetanus for last birth	0.650	0.020	2914	3139	2.247	0.031	0.610	0.689
Births with skilled attendant at delivery	0.576	0.025	2914	3139	2.710	0.043	0.527	0.626
Postnatal care from skilled provider	0.355	0.021	2914	3139	2.397	0.060	0.312	0.397
Total fertility rate (past 3 years)	5.076	0.166	20225	21504	1.655	0.033	4.743	5.409
Neonatal mortality (past 0-4 years)	21.043	2.528	5259	5765	1.085	0.120	15.986	26.099
Post-neonatal mortality (past 0-4 years)	29.270	3.520	5303	5828	1.432	0.120	22.230	36.309
Infant mortality (past 0-4 years)	50.312	4.920	5272	5783	1.426	0.098	40.472	60.152
Child mortality (past 0-4 years)	17.590	3.510	5263	5776	1.834	0.200	10.571	24.610
Under-5 mortality (past 0-4 years)	67.018	6.780	5301	5826	1.719	0.101	53.457	80.578

Table B.13 Sampling errors for Eastern sample, Afghanistan 2010								
			Number of cases				Confidence limits	
Variable	Value (R)	Standard error (SE)	Unweighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	R-2SE	R+2SE
Urban	0.059	0.005	7681	8389	2.031	0.093	0.048	0.070
No education	0.864	0.015	7681	8389	3.931	0.018	0.834	0.895
Secondary education	0.036	0.005	7681	8389	2.490	0.147	0.025	0.047
Higher education	0.005	0.001	7681	8389	1.494	0.240	0.003	0.007
Never married/in union	0.451	0.008	7681	8389	1.429	0.018	0.435	0.467
Currently married/in union	0.537	0.008	7681	8389	1.454	0.015	0.520	0.553
Married before age 20	0.670	0.016	4485	4858	2.244	0.024	0.638	0.701
Currently pregnant	0.135	0.008	6305	6825	1.865	0.059	0.119	0.152
Children ever born	4.304	0.077	4194	4502	1.655	0.018	4.151	4.458
Children surviving	4.107	0.072	4194	4502	1.606	0.017	3.963	4.250
Children ever born to women age 40-49	7.095	0.148	902	979	1.620	0.021	6.799	7.391
Knows any contraceptive method	0.934	0.015	4189	4497	3.780	0.016	0.905	0.963
Knows a modern method	0.932	0.015	4189	4497	3.734	0.016	0.903	0.961
Currently using any method	0.157	0.010	4189	4497	1.853	0.066	0.137	0.178
Currently using a modern method	0.150	0.010	4189	4497	1.808	0.067	0.130	0.170
Currently using a traditional method	0.008	0.002	4189	4497	1.252	0.221	0.004	0.011
Currently using female sterilization	0.007	0.002	4189	4497	1.300	0.246	0.003	0.010
Currently using pill	0.030	0.003	4189	4497	1.162	0.103	0.023	0.036
Currently using IUD	0.009	0.002	4189	4497	1.411	0.226	0.005	0.013
Currently using condoms	0.007	0.001	4189	4497	1.114	0.210	0.004	0.009
Currently use LAM	0.042	0.007	4189	4497	2.177	0.161	0.029	0.056
Currently using withdrawal	0.005	0.001	4189	4497	1.180	0.268	0.002	0.007
Antenatal care from skilled provider	0.519	0.022	2912	3045	2.422	0.043	0.474	0.564
Mothers protected against tetanus for last birth	0.660	0.019	2912	3045	2.167	0.029	0.622	0.698
Births with skilled attendant at delivery	0.370	0.023	2912	3045	2.529	0.061	0.325	0.416
Postnatal care from skilled provider	0.291	0.017	2912	3045	2.068	0.060	0.256	0.326
Total fertility rate (past 3 years)	5.581	0.260	17050	18428	2.582	0.047	5.060	6.102
Neonatal mortality (past 0-4 years)	23.572	2.291	5322	5562	1.043	0.097	18.990	28.153
Post-neonatal mortality (past 0-4 years)	16.318	2.287	5370	5604	1.228	0.140	11.744	20.893
Infant mortality (past 0-4 years)	39.890	2.953	5328	5567	1.005	0.074	33.985	45.795
Child mortality (past 0-4 years)	10.903	1.510	5507	5829	1.089	0.138	7.883	13.923
Under-5 mortality (past 0-4 years)	50.358	3.137	5350	5586	0.983	0.062	44.084	56.633

Table B.14 Sampling errors for Southern sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.277	0.028	5020	3504	4.465	0.102	0.221	0.334
No education	0.775	0.024	5020	3504	4.113	0.031	0.726	0.824
Secondary education	0.079	0.010	5020	3504	2.604	0.126	0.059	0.099
Higher education	0.010	0.002	5020	3504	1.745	0.247	0.005	0.015
Never married/in union	0.431	0.009	5020	3504	1.238	0.020	0.413	0.448
Currently married/in union	0.562	0.008	5020	3504	1.141	0.014	0.546	0.578
Married before age 20	0.587	0.020	2950	2058	2.246	0.035	0.546	0.628
Currently pregnant	0.090	0.007	4097	2841	1.488	0.074	0.077	0.104
Children ever born	3.698	0.077	2830	1968	1.657	0.021	3.544	3.852
Children surviving	3.572	0.071	2830	1968	1.605	0.020	3.430	3.715
Children ever born to women age 40-49	5.723	0.157	634	458	1.665	0.027	5.410	6.037
Knows any contraceptive method	0.815	0.033	2821	1962	4.564	0.041	0.748	0.882
Knows a modern method	0.809	0.035	2821	1962	4.690	0.043	0.739	0.879
Currently using any method	0.241	0.021	2821	1962	2.646	0.089	0.198	0.284
Currently using a modern method	0.225	0.021	2821	1962	2.687	0.094	0.183	0.267
Currently using a traditional method	0.016	0.004	2821	1962	1.534	0.226	0.009	0.023
Currently using female sterilization	0.009	0.002	2821	1962	1.252	0.244	0.005	0.014
Currently using pill	0.074	0.009	2821	1962	1.776	0.118	0.057	0.092
Currently using IUD	0.024	0.006	2821	1962	1.947	0.234	0.013	0.035
Currently using condoms	0.022	0.005	2821	1962	1.738	0.217	0.013	0.032
Currently use LAM	0.021	0.007	2821	1962	2.526	0.326	0.007	0.034
Currently using withdrawal	0.007	0.002	2821	1962	1.105	0.248	0.004	0.010
Antenatal care from skilled provider	0.596	0.041	1650	1097	3.371	0.069	0.514	0.678
Mothers protected against tetanus for last birth	0.519	0.034	1650	1097	2.770	0.066	0.451	0.587
Births with skilled attendant at delivery	0.428	0.034	1650	1097	2.774	0.079	0.360	0.495
Postnatal care from skilled provider	0.407	0.034	1650	1097	2.794	0.083	0.339	0.475
Total fertility rate (past 3 years)	4.702	0.314	11132	7737	2.292	0.067	4.074	5.331
Neonatal mortality (past 0-4 years)	16.053	3.793	2836	1853	1.420	0.236	8.468	23.639
Post-neonatal mortality (past 0-4 years)	19.021	5.564	2829	1840	1.951	0.293	7.893	30.149
Infant mortality (past 0-4 years)	35.074	8.950	2837	1853	2.307	0.255	17.174	52.974
Child mortality (past 0-4 years)	10.622	2.506	2814	1838	1.234	0.236	5.610	15.633
Under-5 mortality (past 0-4 years)	45.323	8.446	2849	1860	1.912	0.186	28.431	62.215

Table B.15 Sampling errors for South Eastern sample, Afghanistan 2010

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban	0.030	0.008	5285	4706	3.303	0.260	0.014	0.045
No education	0.956	0.006	5285	4706	2.277	0.007	0.943	0.969
Secondary education	0.008	0.002	5285	4706	1.781	0.271	0.004	0.012
Higher education	0.002	0.001	5285	4706	1.173	0.411	0.000	0.003
Never married/in union	0.484	0.011	5285	4706	1.641	0.023	0.461	0.506
Currently married/in union	0.507	0.011	5285	4706	1.616	0.022	0.485	0.530
Married before age 20	0.588	0.017	2934	2518	1.921	0.030	0.553	0.623
Currently pregnant	0.147	0.008	4231	3763	1.482	0.055	0.131	0.163
Children ever born	4.190	0.106	2761	2388	1.789	0.025	3.979	4.401
Children surviving	4.081	0.104	2761	2388	1.803	0.026	3.873	4.290
Children ever born to women age 40-49	7.203	0.131	627	549	1.440	0.018	6.941	7.464
Knows any contraceptive method	0.753	0.032	2761	2388	3.912	0.043	0.689	0.818
Knows a modern method	0.753	0.032	2761	2388	3.911	0.043	0.688	0.817
Currently using any method	0.096	0.010	2761	2388	1.709	0.100	0.077	0.116
Currently using a modern method	0.085	0.009	2761	2388	1.613	0.101	0.068	0.102
Currently using a traditional method	0.012	0.005	2761	2388	2.257	0.397	0.002	0.021
Currently using female sterilization	0.004	0.002	2761	2388	1.661	0.491	0.000	0.008
Currently using pill	0.034	0.004	2761	2388	1.290	0.131	0.025	0.043
Currently using IUD	0.004	0.001	2761	2388	1.180	0.364	0.001	0.007
Currently using condoms	0.009	0.002	2761	2388	1.069	0.218	0.005	0.012
Currently use LAM	0.002	0.001	2761	2388	1.257	0.597	0.000	0.004
Currently using withdrawal	0.001	0.001	2761	2388	0.885	0.463	0.000	0.003
Antenatal care from skilled provider	0.474	0.030	1818	1545	2.516	0.062	0.415	0.533
Mothers protected against tetanus for last birth	0.307	0.024	1818	1545	2.247	0.079	0.259	0.356
Births with skilled attendant at delivery	0.257	0.025	1818	1545	2.422	0.097	0.207	0.307
Postnatal care from skilled provider	0.301	0.026	1818	1545	2.414	0.086	0.249	0.353
Total fertility rate (past 3 years)	5.539	0.134	11357	9971	1.277	0.024	5.270	5.807
Neonatal mortality (past 0-4 years)	9.804	1.842	3171	2692	0.980	0.188	6.120	13.488
Post-neonatal mortality (past 0-4 years)	19.340	3.030	3194	2713	1.124	0.157	13.280	25.401
Infant mortality (past 0-4 years)	29.144	3.549	3174	2695	1.144	0.122	22.047	36.242
Child mortality (past 0-4 years)	20.616	2.539	3501	2975	0.905	0.123	15.538	25.695
Under-5 mortality (past 0-4 years)	49.160	3.856	3196	2711	1.004	0.078	41.447	56.873

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Afghanistan 2010

	Female		Male			Female		Male	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	2,219	2.6	2,468	2.8	36	501	0.6	432	0.5
1	2,149	2.5	2,519	2.8	37	520	0.6	447	0.5
2	2,723	3.2	3,225	3.6	38	896	1.0	768	0.9
3	2,804	3.2	3,163	3.6	39	305	0.4	309	0.3
4	2,936	3.4	3,082	3.5	40	1,943	2.3	2,040	2.3
5	2,819	3.3	3,153	3.6	41	213	0.2	223	0.3
6	2,812	3.3	3,427	3.9	42	544	0.6	547	0.6
7	2,773	3.2	3,134	3.5	43	293	0.3	266	0.3
8	3,040	3.5	3,615	4.1	44	229	0.3	184	0.2
9	2,006	2.3	2,292	2.6	45	1,271	1.5	1,411	1.6
10	3,319	3.8	3,671	4.1	46	285	0.3	258	0.3
11	1,090	1.3	1,762	2.0	47	291	0.3	279	0.3
12	3,284	3.8	3,170	3.6	48	555	0.6	462	0.5
13	2,310	2.7	2,191	2.5	49	225	0.3	225	0.3
14	2,696	3.1	2,458	2.8	50	503	0.6	1,430	1.6
15	2,643	3.1	2,261	2.5	51	305	0.4	170	0.2
16	2,634	3.1	2,351	2.6	52	868	1.0	372	0.4
17	1,890	2.2	1,545	1.7	53	431	0.5	194	0.2
18	3,159	3.7	2,797	3.2	54	275	0.3	171	0.2
19	1,381	1.6	1,227	1.4	55	1,187	1.4	895	1.0
20	3,447	4.0	2,755	3.1	56	248	0.3	256	0.3
21	864	1.0	914	1.0	57	171	0.2	172	0.2
22	1,809	2.1	1,682	1.9	58	205	0.2	265	0.3
23	991	1.1	1,048	1.2	59	75	0.1	101	0.1
24	901	1.0	974	1.1	60	1,202	1.4	1,398	1.6
25	2,451	2.8	2,145	2.4	61	70	0.1	77	0.1
26	918	1.1	848	1.0	62	127	0.1	194	0.2
27	833	1.0	870	1.0	63	78	0.1	104	0.1
28	1,339	1.6	1,149	1.3	64	38	0.0	66	0.1
29	473	0.5	439	0.5	65	450	0.5	634	0.7
30	2,246	2.6	2,219	2.5	66	40	0.0	86	0.1
31	302	0.3	315	0.4	67	48	0.1	117	0.1
32	757	0.9	804	0.9	68	79	0.1	128	0.1
33	483	0.6	461	0.5	69	22	0.0	42	0.0
34	389	0.5	310	0.3	70+	1,028	1.2	1,891	2.1
35	1,864	2.2	1,709	1.9	Don't know/ missing	9	0.0	29	0.0
					Total	86,280	100.0	88,799	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.2 Myers' Blended Index

Preference index for terminal digits in the household population 0-80 years of age by Myers' Blended Method, Afghanistan 2010

Terminal digit	Population with terminal digit: Starting at age 0+	Population with terminal digit: Starting at age 10+	Weights for: Column 1	Weights for: Column 2	Blended population: Number	Blended population: Percent distribution	Deviation of percent from 10
0	32,609	28,021	1.0	9.0	284,799	18.98	8.98
1	11,023	6,370	2.0	8.0	73,002	4.87	5.13
2	20,215	14,303	3.0	7.0	160,764	10.72	0.72
3	14,867	8,914	4.0	6.0	112,952	7.53	2.47
4	14,752	8,753	5.0	5.0	117,526	7.83	2.17
5	25,272	19,405	6.0	4.0	229,253	15.28	5.28
6	15,149	8,921	7.0	3.0	132,808	8.85	1.15
7	13,120	7,222	8.0	2.0	119,400	7.96	2.04
8	18,502	11,858	9.0	1.0	178,377	11.89	1.89
9	9,146	4,854	10.0	0.0	91,456	6.10	3.90
Total					1,500,337	100.00	33.73
Summary index of age preference							16.87

Table C.3 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 12-49, and percentage of eligible women who were interviewed (weighted), by age groups, Afghanistan 2010

Age group	Household population of women age 10-54	Interviewed women age 15-49: Number	Interviewed women age 15-49: Percent	Percent of women
10-11	4,409	na	na	na
12-14	8,290	8,165	17.3	98.5
15-19	11,707	11,501	24.3	98.2
20-24	8,011	7,841	16.6	97.9
25-29	6,013	5,914	12.5	98.4
30-34	4,177	4,109	8.7	98.4
35-39	4,085	4,029	8.5	98.6
40-44	3,222	3,165	6.7	98.2
45-49	2,625	2,576	5.4	98.1
50-54	2,383	na	na	na
15-49	48,131	47,299	100.0	98.3

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table C.4 Completeness of reporting

Percentage of cases with information missing for selected demographic and social characteristics (weighted), Afghanistan 2010

Age group	Reference population	Percentage with missing information	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month only		1.53	82,664
Month and year		0.01	82,664
Age at death	Deaths among births in the 15 years preceding the survey	0.07	6,019
Age/date at first union[1]	Ever-married women age 12-49	0.10	26,491
Respondent's education	All women age 12-49	0.20	47,848

[1] Both year and age missing

Table C.5 Births by calendar years and zone

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Afghanistan 2010

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
						AFGHANISTAN						
2010	2,778	181	2,958	99.6	100.0	99.6	108.9	173.7	111.9	na	na	na
2009	5,369	337	5,706	99.0	97.6	98.9	120.1	134.4	120.9	na	na	na
2008	5,579	331	5,909	98.6	99.2	98.6	118.4	153.6	120.1	99.9	91.6	99.4
2007	5,799	385	6,184	98.9	97.3	98.8	118.3	99.2	117.0	102.2	104.2	102.3
2006	5,769	409	6,178	98.6	96.8	98.5	106.7	125.9	107.9	100.5	103.0	100.7
2005	5,683	409	6,092	98.4	97.6	98.4	112.2	132.8	113.5	96.7	96.2	96.6
2004	5,988	440	6,429	98.5	96.5	98.4	116.8	97.4	115.4	107.1	106.6	107.0
2003	5,502	417	5,920	97.9	96.7	97.8	113.0	102.0	112.2	91.9	97.8	92.3
2002	5,984	413	6,397	98.7	97.0	98.6	119.0	116.1	118.8	117.9	93.3	115.9
2001	4,651	468	5,119	98.6	96.1	98.4	116.0	125.7	116.9	80.6	109.8	82.6
2006-2010	25,293	1,643	26,936	98.9	97.9	98.8	114.9	129.8	115.7	na	na	na
2001-2005	27,808	2,148	29,956	98.4	96.7	98.3	115.4	113.9	115.3	na	na	na
1996-2000	22,175	2,053	24,227	98.5	96.8	98.3	107.9	124.7	109.2	na	na	na
1991-1995	16,285	1,796	18,081	98.4	97.5	98.3	99.3	124.3	101.5	na	na	na
<1991	12,018	2,060	14,078	98.1	97.2	98.0	137.2	131.8	136.4	na	na	na
All	103,579	9,698	113,277	98.5	97.2	98.4	113.2	124.4	114.1	na	na	na
						NORTH						
2010	917	43	961	99.5	100.0	99.5	105.2	122.9	105.9	na	99.5	100.0
2009	1,570	114	1,684	99.1	99.4	99.1	114.9	112.4	114.7	na	99.1	99.4
2008	1,579	112	1,691	98.8	100.0	98.8	116.6	145.0	118.2	96.1	98.8	100.0
2007	1,716	136	1,852	99.1	97.5	99.0	100.8	102.3	100.9	102.3	99.1	97.5
2006	1,774	170	1,944	98.8	97.6	98.7	97.9	110.6	98.9	102.9	98.8	97.6
2005	1,733	181	1,914	99.2	97.7	99.0	98.8	124.7	101.0	97.4	99.2	97.7
2004	1,786	208	1,993	98.4	96.0	98.1	95.3	91.1	94.9	107.0	98.4	96.0
2003	1,606	201	1,807	98.4	96.9	98.3	103.5	101.6	103.3	91.6	98.4	96.9
2002	1,719	201	1,920	99.1	98.9	99.0	101.1	112.6	102.2	116.5	99.1	98.9
2001	1,345	212	1,557	99.4	95.8	98.9	97.2	101.1	97.7	79.4	99.4	95.8
2006-2010	7,557	575	8,132	99.0	98.6	99.0	106.6	115.7	107.2	na	na	na
2001-2005	8,189	1,003	9,192	98.9	97.0	98.7	99.1	105.1	99.8	na	na	na
1996-2000	6,524	959	7,483	98.8	97.1	98.6	104.3	116.1	105.7	na	na	na
1991-1995	4,729	858	5,587	99.0	97.5	98.8	105.2	114.4	106.5	na	na	na
<1991	3,707	930	4,637	98.3	97.3	98.1	117.0	122.4	118.0	na	na	na
All	30,705	4,325	35,030	98.8	97.4	98.7	105.0	114.3	106.1	na	na	na
						CENTRAL						
2010	845	64	910	99.6	100.0	99.6	108.6	176.7	112.3	na	na	na
2009	1,959	109	2,068	98.9	96.4	98.7	114.4	145.0	115.8	na	na	na
2008	1,978	129	2,107	98.2	98.2	98.2	109.6	169.6	112.5	101.2	96.4	100.9
2007	1,949	159	2,108	98.8	97.3	98.7	110.6	103.3	110.1	100.3	105.9	100.7
2006	1,908	171	2,079	98.3	96.4	98.1	99.6	124.5	101.4	96.6	109.4	97.6
2005	2,000	154	2,155	97.7	97.1	97.7	109.2	128.6	110.5	104.2	93.8	103.4
2004	1,932	157	2,089	98.4	96.6	98.3	112.3	99.8	111.3	94.6	102.5	95.2
2003	2,083	153	2,236	97.5	98.0	97.6	103.5	84.5	102.1	108.0	99.5	107.3
2002	1,928	150	2,077	98.0	94.3	97.7	110.4	111.9	110.5	101.0	84.5	99.6
2001	1,735	202	1,937	97.8	96.3	97.7	114.5	134.0	116.4	92.3	131.0	95.2
2006-2010	8,639	633	9,272	98.6	97.4	98.5	108.5	134.2	110.0	na	na	na
2001-2005	9,678	816	10,494	97.9	96.4	97.8	109.7	111.4	109.9	na	na	na
1996-2000	7,851	856	8,707	97.6	96.3	97.5	107.9	137.8	110.5	na	na	na
1991-1995	6,170	718	6,888	97.5	96.9	97.4	98.7	122.2	100.9	na	na	na
<1991	4,647	920	5,566	97.1	97.1	97.1	133.0	131.3	132.7	na	na	na
All	36,985	3,943	40,928	97.8	96.8	97.7	109.7	127.0	111.3	na	na	na

Continued…

Table C.5—*Continued*

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
						SOUTH						
2010	1,015	73	1,088	99.6	100.0	99.7	112.6	212.8	117.3	na	na	na
2009	1,839	114	1,954	99.0	97.0	98.9	131.4	149.8	132.4	na	na	na
2008	2,022	89	2,111	98.9	99.7	98.9	129.5	143.5	130.0	101.8	87.6	101.1
2007	2,134	90	2,224	98.8	97.0	98.8	143.4	88.1	140.5	103.9	114.0	104.3
2006	2,087	68	2,155	98.8	95.9	98.8	122.4	181.4	123.8	102.2	83.2	101.5
2005	1,949	74	2,023	98.4	98.6	98.5	129.4	166.6	130.6	89.5	102.9	89.9
2004	2,271	75	2,346	98.7	97.5	98.6	142.2	111.0	141.1	120.7	109.9	120.3
2003	1,813	64	1,877	97.8	92.7	97.6	135.5	164.3	136.3	78.7	92.2	79.1
2002	2,337	62	2,399	99.1	97.2	99.1	143.0	140.3	142.9	138.1	106.4	137.1
2001	1,571	54	1,624	98.8	96.2	98.7	137.2	247.2	139.7	71.6	85.6	72.0
2006-2010	9,097	434	9,532	99.0	97.9	98.9	129.2	144.5	129.9	na	na	na
2001-2005	9,941	329	10,270	98.6	96.6	98.5	137.8	155.1	138.3	na	na	na
1996-2000	7,800	238	8,038	99.1	97.1	99.0	111.0	116.7	111.1	na	na	na
1991-1995	5,386	219	5,606	99.0	99.5	99.0	95.1	184.7	97.5	na	na	na
<1991	3,665	210	3,875	99.2	97.2	99.1	168.6	189.2	169.7	na	na	na
All	35,889	1,430	37,320	98.9	97.6	98.9	124.7	152.7	125.6	na	na	na

Note: The years 1991-2010 in the Gregorian calendar roughly correspond to the years 1370-1389 in the Afghan calendar.
na = Not applicable
[1] Both year and month of birth given
[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.6 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Afghanistan excluding the South zone, Afghanistan 2010

Age at death (days)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1	89	66	50	52	256
1	134	141	94	99	468
2	62	80	54	35	231
3	64	85	81	58	287
4	11	19	23	13	66
5	26	48	38	25	137
6	23	14	27	15	79
7	22	24	30	28	103
8	9	10	7	10	35
9	11	13	7	6	37
10	39	30	32	33	134
11	6	5	7	3	21
12	7	11	18	7	43
13	3	4	4	6	17
14	3	5	5	2	15
15	19	24	18	19	80
16	1	1	2	5	9
17	1	1	3	2	6
18	5	2	4	2	13
19	1	0	0	1	2
20	25	31	39	32	127
21	0	4	3	3	10
22	0	4	0	4	8
23	0	2	0	0	2
24	3	3	0	0	6
25	6	15	6	6	34
26	0	0	3	0	3
27	5	2	1	2	10
28	1	2	1	3	7
29	8	10	6	8	31
30	3	1	2	5	10
31+	3	2	2	1	8
Total 0-30	588	653	561	482	2,285
Percent early neonatal[1]	70	69	65	61	67

[1] ≤6 days / = 30 days

Table C.7 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Afghanistan excluding the South zone, Afghanistan 2010

Age at death (months)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1[a]	588	653	561	482	2,285
1	70	115	102	54	341
2	84	112	80	70	347
3	98	84	84	75	341
4	59	74	41	59	234
5	40	59	73	47	219
6	75	86	91	75	327
7	38	48	45	26	156
8	40	32	45	31	147
9	21	34	43	36	134
10	26	33	21	14	94
11	36	29	34	53	152
12	7	15	19	12	53
13	37	58	75	39	210
14	6	26	34	22	88
15	10	15	11	14	50
16	8	8	16	7	40
17	5	12	14	10	40
18	14	44	48	33	139
19	3	6	6	5	21
20	2	1	4	7	14
21	1	4	4	1	10
22	1	5	9	4	19
23	1	3	7	4	16
24+	0	0	1	1	1
1 year	0	0	1	2	3
Total 0-11	1,174	1,359	1,220	1,024	4,776
Percent neonatal[1]	50	48	46	47	48

[a] Includes deaths under one month reported in days
[1] Under one month / under one year

Table C.8 Percent of early neonatal and neonatal deaths

Regional data on the percent of early neonatal deaths to neonatal deaths and the percent of neonatal deaths to infant deaths for the five years preceding the survey

Country	Time period of estimate	Percent early neonatal[1]	Percent neonatal[2]
Afghanistan 2010	**2006-2010**	**68**	**51**
Bangladesh 2007	2003-2007	76	73
Pakistan 2006-07	2002/03-2006/07	75	71
Azerbaijan 2006	2002-2006	69	67
Nepal 2006	2002-2006	72	69
India 2005-06	2001/02-2005/06	78	70
Turkmenistan 2000	1996-2000	66	49
Kazakhstan 1999	1995-1999	83	57
Kyrgyz Republic 1997	1993-1997	80	112

Source: MEASURE DHS STATcompiler; http://www.measuredhs.com.
[1] ≤6 days/30 days
[2] Under one month/under one year

Table C.9 Sex ratio of live births

Sex ratio of live birth in the 0-4 years preceding the survey, according to zones, by data source, Afghanistan 2010

Zone	Birth history data	Household data
Central	107.1	108.7
North	109.5	103.2
South	129.8	128.1
Total	115.2	113.1

Table C.10 Completeness of information on siblings

Number of sisters and brothers reported by interviewed women and completeness of age data for living siblings and age at death (AD) and years since death (YSD) data for dead siblings, Afghanistan 2010

	Sisters		Brothers		Total	
	Number	Percent	Number	Percent	Number	Percent
All siblings	107,412	100.0	123,582	100.0	230,994	100.0
Living	95,710	89.1	108,903	88.1	204,613	88.6
Dead	11,363	10.6	14,395	11.6	25,758	11.2
Status unknown	338	0.3	284	0.2	622	0.3
Living siblings	95,710	100.0	108,903	100.0	204,613	100.0
Age reported	95,563	99.8	108,764	99.9	204,328	99.9
Age missing	147	0.2	139	0.1	286	0.1
Dead siblings	11,363	100.0	14,395	100.0	25,758	100.0
AD and YSD reported	11,304	99.5	14,326	99.5	25,630	99.5
Missing only AD	59	0.5	69	0.5	128	0.5

Table C.11 Respondent and sibling year of birth

Percent distribution of respondents and siblings by year of birth, Afghanistan 2010

Year of birth	Respondents	Siblings
Before 1966	7.1	6.9
1966-70	8.1	6.3
1971-75	10.6	9.4
1976-80	10.6	11.6
1981-85	15.5	15.1
1986-90	20.3	15.5
1991-95	27.7	15.1
1996 or later	0.0	20.0
Total	100.0	100.0
Median year of birth	1986	1986
Number of cases	39,466	230,978

The years 1966-1996 in the Gregorian calendar roughly correspond to the years 1345-1375 in the Afghan calendar.

TECHNICAL NOTE ON ESTIMATION OF INFANT AND CHILD MORTALITY FROM AMS 2010 DATA

Appendix D

D.1 SOURCES OF DATA FOR ESTIMATING EARLY CHILDHOOD MORTALITY

Data on infant and child mortality were obtained in the AMS 2010 by asking several summary questions on the number of children ever-born and children surviving and then by collecting a full pregnancy history in the women's interviews, by asking questions about all household deaths during a specified period. The approaches that are used to derive child mortality estimates vary across the three data sources.

D.1.1 Pregnancy History

A full birth history is the DHS standard source of child mortality data. In the AMS 2010 a full pregnancy history replaced the birth history. Eligible women were asked whether each of their pregnancies resulted in a live birth or not. For live births women were asked the date of birth, the sex, the name of the child, whether the birth was multiple, and whether the child was currently living. For living children, the mother was asked the child's current age and whether he/she was currently living with the mother in the household. For dead children mothers were asked the age at death in one of three different modes: in days if the child had died at less than one month of age, in months if the child had died at less than two years of age, and in years if the child had died at two or more years of age. Probing questions were asked for additional children in long birth intervals and to differentiate non-live births from live births (any breathing, sign of movement, or any other signs of life). In addition to the full pregnancy history, summary measures were also obtained from eligible women respondents who were asked about the number of children, by sex, to whom they gave birth who are living with them, who are living somewhere else, and who have died. Additionally, the total number of non-live-birth pregnancies was obtained. Discrepancies between the summary questions and the pregnancy history were resolved with the respondents.

From the pregnancy history direct estimates of mortality specific to age and time intervals are produced using synthetic cohort life table calculations. The direct calculation follows standard DHS procedure: in the synthetic method small age intervals, of 0, 1-2, 3-5, and 6-11 months and one, two, three, and four years, are used to adapt to the curvature of force of mortality by age. Infant and child mortality are estimated for five-year date intervals (periods of 0-4, 5-9, and 10-14 years prior to the survey). Each time-age segment involves three birth cohorts of children: two cohorts partially exposed during the segment and one fully exposed. Probabilities of dying during the segment are calculated by dividing the number of deaths in the segment by the number of surviving children entering the lowest age of the segment, taking account of the amount of time each cohort is exposed in the segment. The probabilities of dying are combined into standard mortality rates for infant and child mortality.

This direct estimation method uses no models, and no adjustments to the rates are made. The method allows exact calculation of mortality by time period and by age, which is important for determining trends in mortality. Drawing both numerators and denominators from the same data source reduces bias and calculation errors. The method produces the age pattern of mortality. Rates can be calculated for demographic characteristics of children—birth order, age of mother at delivery, multiplicity of birth, prematurity and size/weight at birth, and birth interval—as well as for the characteristics of the mother and the household. The mortality estimation from pregnancy or birth histories does not cover children whose mothers have passed away, are out of the eligible age range for the survey, or are not living in a household in the country. The resulting bias is thought to be very small.

D.1.2 Household Death Roster

The respondent to the Household Questionnaire was asked about all deaths that occurred to members of the household since 21 March 2005 (1 Hammal 1384). Sex and age at death were ascertained for each member reported in the household schedule as having died. Additional questions were asked in a special verbal autopsy module about the date of birth and the date of death. This information is tabulated by age at death to form the numerators of mortality rates by age interval.

The denominators of the rates (i.e., exposure to mortality) are taken from a combination of data: the listing of current household members by age and by when they moved into the household; a listing of former household members present on 21 March 2005 (1 Hammal 1384) who moved out, by when they moved out and age at moving out; and a listing of household members who died after 21 March 2005 (1 Hammal 1384), by date of death and age at death.

The method of calculating infant and child mortality rates from these household data is direct and does not depend on models or assumptions. From the dates of death, dates of birth, and dates of moving into or out of the household, numerators (deaths) and denominators (exposure) can be calculated for the five years preceding the survey.

In the AMS 2010 exposure was not completely covered, since only a partial movement history was obtained. Specifically, no information was obtained for persons not present on 21 March 2005 (1 Hammal 1384) or at the time of the survey but who had moved in and later had moved out; therefore, they are not included in the denominator (exposure). Also, households in which all members died in the five-year period before the survey or which were disbanded for other reasons are included neither in the numerator nor in the denominator of the mortality rates. Also, it is unclear whether households that formed after 21 March 2005 (1 Hammal 1384) are recorded, since none of the members was present on that date.

A potential advantage of the household mortality data is that it captures the experience of children recently born to women who are outside the age range of 15-49 that defined eligibility for the women's interviews in which the detailed pregnancy histories were collected. A disadvantage is the lack of information on birth dates for surviving children; detailed exposure time is available only for the dead neonates and not for the survivors. As a result, neonatal and postneonatal mortality rates cannot be calculated from the household mortality data. Heaping on ages for surviving children also may affect the infant mortality estimates. Also, household mortality data cannot be used to explore trends, since estimates are limited to the five-year period prior to the survey. Furthermore, recall error may result in deaths being transferred across the cut-off for eligibility for the death roster; mortality rates would be biased upward if the transference involved deaths that took place prior to the cutoff but were mistakenly reported as having occurred after 21 March 2005 (1 Hammal 1384) or biased downward if the transference resulted in deaths that occurred after the cut-off to go unreported.

D.1.3 Summary Measures of Children Ever-Born and Surviving

Prior to administering the birth history, eligible women respondents were asked about the number of children they gave birth to, by sex, who are living with them, who are living somewhere else, and who have died. Additionally, the total number of pregnancies that did not end in a live birth was obtained. An estimate of infant and under-5 mortality can be produced with these data using a method developed by William Brass. The Brass, or indirect, method is based on the number of children ever-born and the number surviving, tabulated by the age of the mother. The method uses model fertility and mortality schedules to adjust the proportions surviving by the age group of the mother to the standard rates.

The indirect methodology has several problems and thus is most appropriate in situations where there are no other sources of data. The counts of births and surviving children may be subject to omission, although less so if a full pregnancy/birth history is asked to probe for each birth and the interval between births. Occasionally, stillbirths may be included in the total birth counts, leading to upwardly biased mortality estimates. Another problem in some countries is inaccuracy in the reported age of the women, especially where the level of education is low.

Also, the indirect methodology depends on model life tables, which may or may not hold for the area and time in question. The age pattern of mortality in some countries has been found to be outside the limits of all the families of available tables, which are based mainly on developed and advanced developing countries. In addition, the estimates produced cover a wide time period, averaging values over that period. If there have been swings in mortality level due to wars, famine, epidemics, etc. or recent improvements in health care, then the estimates from data on children ever-born and surviving will not represent those swings and current mortality may be over underestimated.

Another problem with the method arises from the fact that it is usual to use the proportion of children surviving of women in the 20-24 and 25-29 age groups to produce the infant and under-5 mortality estimates. These age groups have central ages of 22.5 and 27.5 years, respectively, and the average ages are actually less than the central ages. The average time since birth of children born to women 20-24 and 25-29 is two years and three years, respectively. Thus, the average age at childbirth for women 20-24 and 25-29 is about 20 years and 24 years, respectively. Therefore, the estimates produced from these age groups are somewhat biased, in that they consist of more first births and births at younger ages than is true for the whole population of women of reproductive age. Moreover, if a woman reports more than one birth, the birth interval necessarily is short, especially for women 20-24. In general, it has been found that using the age group 25-29 years overestimates mortality by about 10 percent.

Finally, if rates are estimated using indirect techniques, dating of the estimate is possible only if either no trend or a linear trend in the estimated rates is assumed.

D.2 AMS 2010 Child Mortality Estimates

Estimates of child mortality levels were prepared using each of the three methods described above. In each case the results are presented for all Afghanistan, Afghanistan excluding the South zone, and the South zone. In considering the national results and the results for the South zone, one should note that a substantial proportion of the rural population, particularly in the South zone, was not interviewed due to the security situation. This exclusion gives the national estimates and especially the estimates for the South zone a bias toward urban and the more secure rural areas.

D.2.1 Estimates from the Pregnancy History Data

As described above, the AMS 2010 pregnancy history data provide the most comprehensive body of information on child mortality and, thus, are the primary source of information used for exploring levels, trends, and differentials in child mortality in this report. Table D.1 presents the child mortality estimates for the ages 0-4 years by sex.

The estimated infant mortality rate for both sexes is 55 deaths per 1,000 births for all Afghanistan, 64 for Afghanistan excluding the South zone, and 36 for the South zone. The under-5 mortality rates for the three areas are 71, 83, and 50. The rates for the South zone are very low in comparison with the rates for Afghanistan excluding the South. Even allowing for the bias toward urban and more secure rural areas, the comparison suggests that there may have been substantial omissions in the reporting of child deaths in the pregnancy histories obtained from South zone respondents.

Table D.1 Female and male infant, child and under-5 mortality rates (pregnancy history 0-4 years prior to survey)

Probability of dying under age five for 0-4 years prior to survey, from pregnancy history, Afghanistan 2010

	FEMALES				MALES				BOTH SEXES	Sex ratios		
Age group	Survivors at beginning of age group	Number of deaths	Probability of dying (nqx)	Number of survivors (lx)	Survivors at beginning of age group	Number of deaths	Probability of dying (nqx)	Number of survivors (lx)	Probability of dying (nqx)	Survivors at beginning of age group	Number of deaths	Probability of dying (nqx)
						Afghanistan						
<1	13,748	707	0.05098	100,000	15,790	920	0.05788	100,000	0.05467	115	130	114
1-4	13,041	237	0.01726	98,274	14,870	276	0.01770	98,230	0.01749	114	116	103
<5	13,748	944	0.06735	91,655	15,790	1196	0.07455	90,907	0.07120	115	127	111
						Afghanistan excluding the South zone						
<1	9,336	552	0.05872	100,000	10,075	705	0.06981	100,000	0.06447	108	128	119
1-4	8,785	183	0.01983	98,017	9,369	188	0.01963	98,037	0.01973	107	102	99
<5	9,336	735	0.07739	90,431	10,075	893	0.08807	89,404	0.08293	108	121	114
						South zone						
<1	4,412	155	0.03475	100,000	5,716	215	0.03721	100,000	0.03614	130	139	107
1-4	31,208	54	0.01195	98,805	32,267	88	0.01462	98,538	0.01331	103	164	122
<5	35,620	209	0.04629	94,232	37,983	303	0.05128	93,484	0.04886	107	145	111

D.2.2 Estimates from the Household Data

Table D.2 gives infant, child (ages 1-4 years), and under-5 mortality rates (note that these are the probabilities of survival even though they are termed rates) for all Afghanistan, Afghanistan excluding the South zone, and the South zone, by sex of child for the five-year period (0-4 years) preceding the survey, according to the household data. The estimated infant mortality rate for both sexes is 65 deaths per 1,000 births for all Afghanistan, 76 for Afghanistan excluding the South zone, and 43 for the South zone. The under-5 mortality rates are 84, 97, and 58, respectively. These estimates were produced by dividing the number of deaths by the person-years of exposure to mortality, taking into account movement into and out of the household during the period. The household estimates are approximately 15 percent higher than the rates estimated from the pregnancy history data. As in the estimates based on pregnancy history, the rates for the South zone are unexpectedly lower than the rates for Afghanistan excluding the South.

Table D.2 Female and male infant, child, and under-5 mortality rates (household deaths 0-4 years prior to survey with migration)

Probability of dying under age five for 0-4 years prior to survey, from household death roster with adjustment for movement into and out of household

	FEMALES					MALES					BOTH SEXES	SEX RATIOS		
Age group	Person years	Number of deaths	Death rate (nMx)	Probability of dying (nqx)	Number of survivors (lx)	Person years	Number of deaths	Death rate (nMx)	Probability of dying (nqx)	Number of survivors (lx)	Probability of dying (nqx)	Person years	Number of deaths	Probability of dying (nqx)
Afghanistan														
<1	11,214	696	0.06202	0.05916	100,000	12,650	932	0.07367	0.06967	100,000	0.06473	113	134	118
1-4	46,198	232	0.00501	0.01981	94,084	52,602	280	0.00532	0.02103	93,033	0.02046	114	121	106
<5	57,412	928	0.01616	0.07780	92,220	65,252	1,212	0.01857	0.08923	91,077	0.08388	114	131	115
Afghanistan excluding South zone														
<1	7,575	543	0.07171	0.06791	100,000	7,951	716	0.09009	0.08418	100,000	0.07624	105	132	124
1-4	31,208	176	0.00563	0.02222	93,209	32,267	190	0.00590	0.02325	91,582	0.02274	103	108	105
<5	38,783	719	0.01854	0.08862	91,138	40,218	906	0.02253	0.10547	89,453	0.09720	104	126	119
South zone														
<1	3,639	152	0.04187	0.04055	100,000	4,699	216	0.04588	0.04429	100,000	0.04266	129	142	109
1-4	14,991	56	0.00373	0.01477	95,945	20,334	90	0.00442	0.01749	95,571	0.01634	136	161	118
<5	18,630	208	0.01116	0.05472	94,528	25,033	306	0.01222	0.06101	93,899	0.05833	134	147	111

D.2.3 Estimates from Data on Children Ever-Born and Children Surviving

Indirect methods were used to derive the child mortality estimates and the corresponding life expectancies at birth presented in Table D.3 for Afghanistan, for Afghanistan excluding the South zone, and for the South zone. Overall, the indirect estimates are similar to the rates derived from the household data and somewhat higher than the rates based on the pregnancy history data. Again, the rates for the South zone are clearly out of line with those for the rest of Afghanistan.

Table D.3 Indirect estimates of infant and child mortality by sex

	All Afghanistan			Afghanistan excluding South zone			South Zone		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Infant ($_1q_0$)	62	54	58	75	66	71	38	30	35
One-to-four ($_4q_1$)	24	19	22	32	26	29	11	15	9
Under-5 ($_5q_0$)	85	72	79	105	90	98	49	45	44
Life expectancy (e_0)	61.9	63.6	62.6	59.1	61.7	59.9	67.4	69.7	68.3

Note: Using age group 25-29 years and Coale-Demeny West Model Life Tables

D.3 REVIEW OF DATA QUALITY ISSUES

Retrospective data on births and deaths such as those collected in the AMS pregnancy history are subject to several types of potential errors. The most serious is omission, i.e., underreporting of births and deaths, especially disproportionate underreporting of child deaths, since such omissions affect the estimates of mortality levels. In addition, displacement of birth and death dates affects mortality trends, and misreporting of age at death may distort the age pattern of mortality. The analyses in the following sections discuss how these problems may have affected the AMS 2010 mortality estimates.

D.3.1 Evidence of Underreporting of Recently Born Children

Figures D.1 through D.3 present the age distributions of living children from the pregnancy history and the household schedule for all Afghanistan, Afghanistan excluding the South, and the South zone, respectively. Notable in the figures are the substantially smaller numbers of children ages 0 and 1 compared with the numbers of older children. In this regard, the pregnancy history and household distributions are very similar, indicating that about the same reporting errors affected both data sources. The number of surviving children ages 0 and 1 years is higher from the pregnancy history than the number in the household data. However, there are more children two years and older in the household data than in the pregnancy history data. This is understandable, since some of the mothers of these children may be older than 49 and thus not eligible for interview. For living children there does not appear to be any date of birth shifting at the boundary for asking additional questions on births and deaths—that is, four to five years prior to the survey—in either data source.

Figure D.1 **Number of Living Children From the Birth History and From the Household Schedule by Age, Afghanistan 2010**

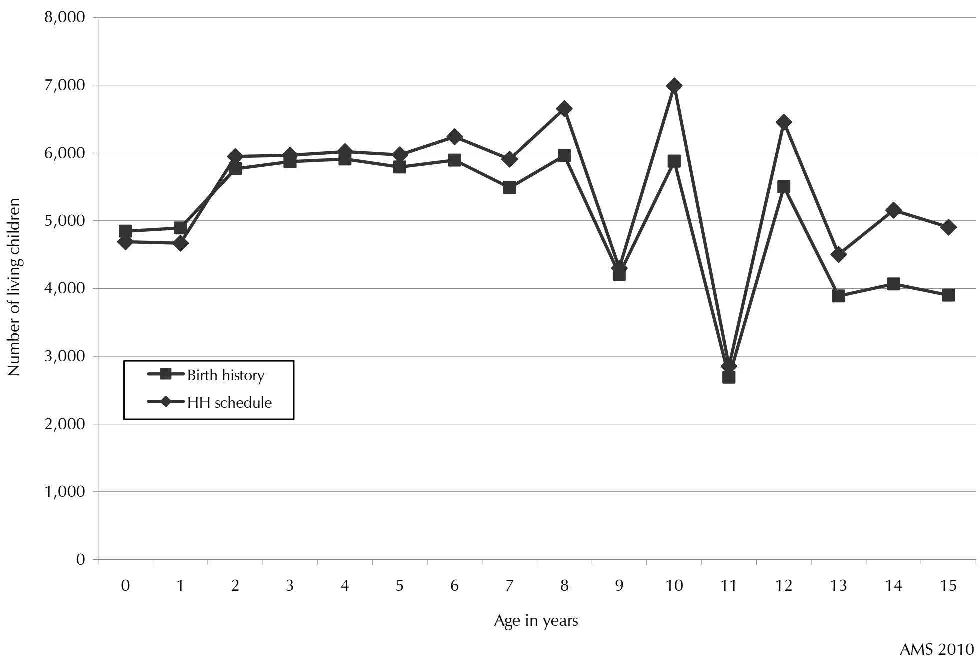


Figure D.2 Number of Living Children From the Birth History and From the Household Schedule by Age, Afghanistan Excluding the South Zone 2010

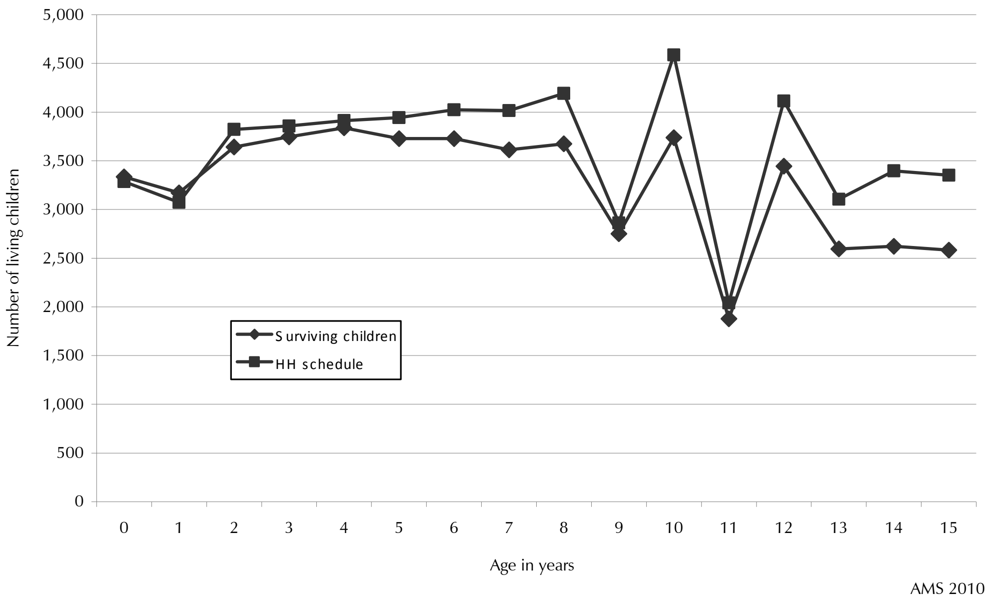
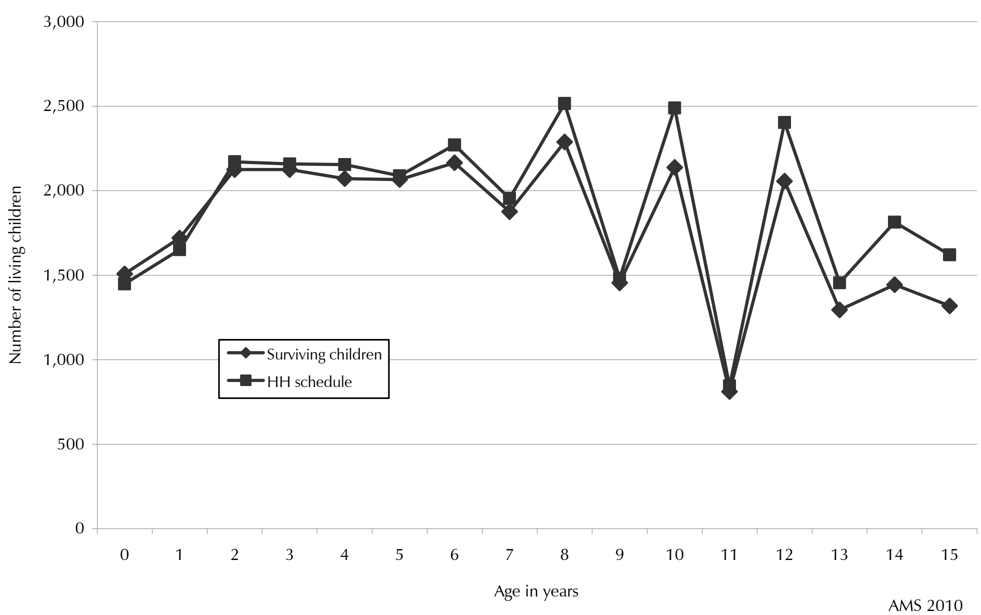


Figure D.3 Number of Living Children From the Birth History and From the Household Schedule by Age, South Zone, Afghanistan 2010



Given the apparent omission of living children ages 0 and 1 in both the household schedule and pregnancy history data for Afghanistan excluding the South zone, a better estimate of infant and child mortality from the pregnancy may be obtained using the five-year period 2-6 years prior to the survey instead of the traditional 0-4 years. The results shown in Table D.4 indicate only slightly higher rates of infant and under-5 mortality, rising to 67 for infant (instead of 64) and 87 for under-5 (instead of 83), and are in line with the trends of mortality. Thus, it does not appear that the omission of some births that occurred in the two years prior to the survey was differentiated by survival of the children.

Table D.4 Early childhood mortality rates for 5-year periods beginning at 2 years prior to survey

Neonatal, postneonatal, infant, child, and under-fiveunder-5 mortality rates for modified five-year periods preceding the survey, Afghanistan excluding the South zone 2010

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-fiveUnder-5 mortality ($_5q_0$)
2-6	30	37	67	22	87
7-11	34	44	78	32	107
12-16	33	43	75	35	108

D.3.2 Evidence of Underreporting of Child Deaths

Omission of births would not represent a problem for mortality estimation if women underreported surviving and dead children at the same rate. However, dead children are typically disproportionately represented in any omitted births because mothers are reluctant to talk about their dead children due to sorrow or guilt associated with their deaths or because their culture discourages discussion of the deceased.

D.3.2.1 Sex Selectivity in Reporting of Deaths

One approach to detecting omission is to look for evidence of sex selectivity in the reporting of childhood deaths. A simple measure of sex selectivity is the ratio of deaths among male births to those among female births. However, unlike the sex ratio of births, for which the range is assumed to be between 103 and 107, the interpretation of the sex ratio of deaths is more complex. This is because, for biological reasons, boy deaths outnumber girl deaths, and no simple standard exists for assessing if a given sex ratio of deaths exceeds (or is lower than) what might naturally be expected, and, thus, indicates selective omission of girl (or boy) deaths. To assess sex selective underreporting of deaths, it is, therefore, better to use the sex ratio of mortality, which can be calculated by dividing the sex ratio among child deaths by the sex ratio of births. Model life tables can be used to evaluate if the sex ratio of mortality exceeds the expected ratio for a given childhood mortality rate. For purposes of comparison, the Coale-Demeny West Model Life Tables are used in this report. In the model life tables, the sex ratios for infant mortality range from 118 at level 13 (female life expectancy of 50.0) to 126 at level 19 (female life expectancy of 65.0). For under-5 mortality, the model life table sex ratios are 110 to 121, respectively. In general, in considering differences in the sex ratios with those of survey data, it should be recognized that the latter can have wide confidence intervals.

All three sources of AMS mortality data can be examined for evidence of sex selectivity. Considering the pregnancy history results, the final three columns in Table D.1 include sex ratios of surviving births (the denominator in the calculation of mortality) and deaths as well as the sex ratios of the probabilities of death for each age interval and region. Looking at the ratios for the South zone, there is a high sex ratio of births in the under-1 age group, and uniformly high sex ratios of deaths. Moreover, the sex ratios of the mortality rates do not compare well with those of the model life tables. For example, the sex ratios for infant mortality are below those of any of the Coale-Demeny West Model Life Tables, and the sex ratio for under-5 mortality compares to level 12 (female life expectancy of 47.5), indicating poor data quality and varying levels of omission of both living and dead children for each sex although with a tendency for omission to be greater for girls than boys.

In the patterns for Afghanistan excluding the South zone, the ratios of surviving children are somewhat too high at around 108, indicating a small relative undercount of living girls. The sex ratios of the mortality rates for infant and under-5 mortality (119 and 114, respectively) are just about those of the Coale-Demeny West Model Life Tables at level 15 (female life expectancy of 55.0). At this level, under-5 mortality is 157 for boys and 139 for girls. This level of mortality is too high and the sex ratios of the mortality rates are too low. It is more likely that there is a relative undercount of male deaths (and of their births) in the 0-4 year period of the pregnancy history. Separating the North from the Central zone and comparing with the West Model Life Tables, it appears that the undercount of males is concentrated in the North zone (not shown in the table). The sex ratio of mortality in the preceding five years of 122 (134 deaths/110 births) for the Central zone is between those of levels 17 and 18 (female life expectancies of 60.0 and 62.5 years) and thus quite acceptable. The North zone sex ratio of mortality in this time period is 108 (116 deaths/107 births), and is too low, indicating an undercount of dead boys in this zone. However, because of the relatively small number of deaths by zone, the confidence intervals overlap and are quite wide so that the differences between zones and with the model life tables may just be due to sampling variation.

With respect to the household data, the final three columns in Table D.3 show the sex ratios of exposure and deaths and of the probabilities of death for each age interval and region. The sex ratios for exposure for the South zone appear to be high at 129 for infant mortality and 134 for under-5 mortality, probably due to an omission of living girls relative to boys. However, the sex ratios of the mortality rates are too low compared with the model life tables, indeed indicating mortality below level 1 (life expectancy of 20.0). The sex ratios of the mortality rates therefore indicate an omission of boy deaths relative to that of girls. That is not to say that girl deaths are not omitted but rather that they have not been omitted to the extent of those of boys. However, adjusting for the sex ratios so that they are within normal limits as indicated by the model life tables only raises the South zone under-5 mortality rate from 58 to 62, clearly not sufficient to correct for under-reporting.

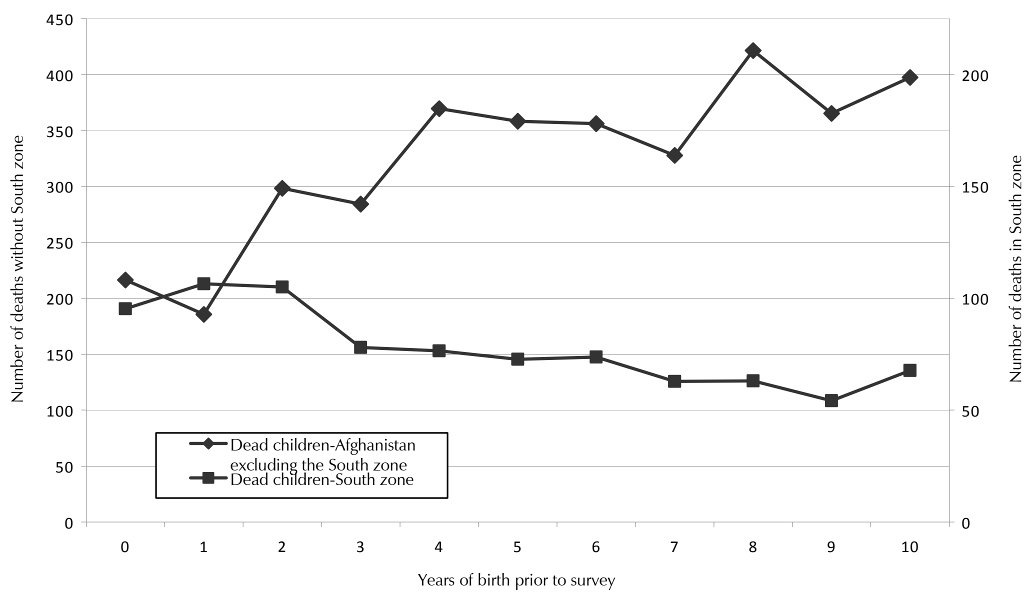
For Afghanistan excluding the South zone, the sex ratios for exposure are within an acceptable range of 103 to 107. The sex ratio for deaths is high for infant deaths, perhaps indicating a possible omission of girl deaths under age 12 months. Looking at the sex ratios of the rates for Afghanistan excluding the South zone, they are consistent with the model life table values at level 18 (female life expectancy of 62.5 years). At that level, the infant mortality rate is 60 for girls and 74 for boys and under-5 mortality rate is 84 for girls and 100 for boys, compared with the calculated infant mortality rates of 68 for girls and 84 for boys and under-5 rates of 89 for girls and 105 for boys. Thus the level of the mortality rates and the sex ratios of the rates are generally consistent for Afghanistan excluding the South zone but suggest the level of mortality may be about 5 to 10 percent too high. From the model life tables, both sex rates are consistent with a level of 67 for infant mortality and 92 for under-5 mortality.

Finally, the sex ratios of the rates calculated using indirect techniques can be compared to those ratios in the model life tables. The sex ratio of the under-5 mortality rates are 117 for all Afghanistan, 116 for Afghanistan excluding the South zone, and 109 for the South zone. At the estimated life expectancies, the model life table sex ratios are 119 for all Afghanistan, 116 for Afghanistan excluding the South zone, and 127 for the South zone. Thus, the sex ratio for Afghanistan without the South zone is, therefore, totally consistent with the estimated under-5 mortality level, while the sex ratio for the South zone is very inconsistent.

D.3.2.2 Distribution of Deaths by Years Since Birth

Figure D.4[1] compares the distribution of deaths from the pregnancy history[2] according to the number of years since the child's birth for the South zone and for Afghanistan excluding the South zone. The patterns of the numbers of dead children are completely different. In Afghanistan without the South zone, the numbers of death rise with time since birth, which is to be expected, as exposure time is longer. In contrast, in the South zone the pattern is contrary to that expected, implying omission of dead children that becomes increasingly severe with time since birth, especially for those born two or more years prior to the survey.

Figure D.4 **Dead Children by Number of Years Since the Child's Birth by Zone, Afghanistan 2010**



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D.3.2.3 Omission of Neonatal Deaths

The pregnancy history results were also examined for evidence of omission of neonatal deaths. There are several factors that may lead to higher underreporting of children who die in the neonatal period than of those who die subsequently. First, there is a fine line between a stillbirth and a live birth of a child who soon dies, and survey respondents may not be aware of the characteristics that demographers and epidemiologists use to distinguish one from the other. Also, respondents may be reluctance to talk about sad and painful experiences, and cultural norms may discourage mention of early deaths.

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[1] The vertical axes have been adjusted to represent equivalent sample sizes

[2] Evaluation of omission of dead children by year of birth prior to the survey using the household death rosters is not possible. This is because the cumulative risk of death increases with age and the household death roster provides the date of birth only for household members who died in the three years preceding the survey.

Several methods can be used to evaluate the possibility and quantity of omission of neonatal deaths: comparing the numbers of stillbirths and early neonatal deaths (those in the period 0-6 days after birth); comparing the numbers of neonatal, postneonatal, and infant deaths; and comparing neonatal mortality rates by sex, maternal age, birth order, and socio-economic status.

Table D.5 gives the numbers of stillbirths and early neonatal deaths. In the usual pattern these numbers are approximately equal. For Afghanistan without the South zone, this pattern holds, as shown in the last column of the table. For the South zone there appear to be somewhat too many stillbirths in comparison with early neonatal deaths, either due to classification error or, more likely, an omission of early neonatal deaths.[3]

Table D.5 Perinatal mortality

Number of stillbirths and early neonatal deaths, and perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Afghanistan 2010

Zone	Number of stillbirths	Number of early neonatal deaths	Perinatal mortality rate	Number of pregnancies of 7+ months duration	Percent stillbirths of perinatal deaths
Afghanistan	621	538	39	29,717	54
Afghanistan excluding the South zone	402	409	42	19,489	50
South zone	219	129	34	10,229	63

The age pattern of deaths in infancy also can be examined for evidence of omission of neonatal deaths. The ratios of early neonatal to neonatal deaths and of neonatal deaths to infant deaths are shown in Table D.6 for all Afghanistan and Afghanistan excluding the South zone. Both types of ratios are within the ranges of those for England and Wales, 1905 to 1997, and for 106 DHS surveys (Hill & Choi, 2006). Thus, they do not suggest omission of neonatal deaths.

Table D.6 Ratios of deaths that are early neonatal and neonatal

Ratios	Period prior to survey 0-4	5-9	10-14
All Afghanistan			
Early neonatal/neonatal	68	69	66
Neonatal/infant	51	49	46
Afghanistan excluding South zone			
Early neonatal/neonatal	69	69	65
Neonatal/infant	50	48	46

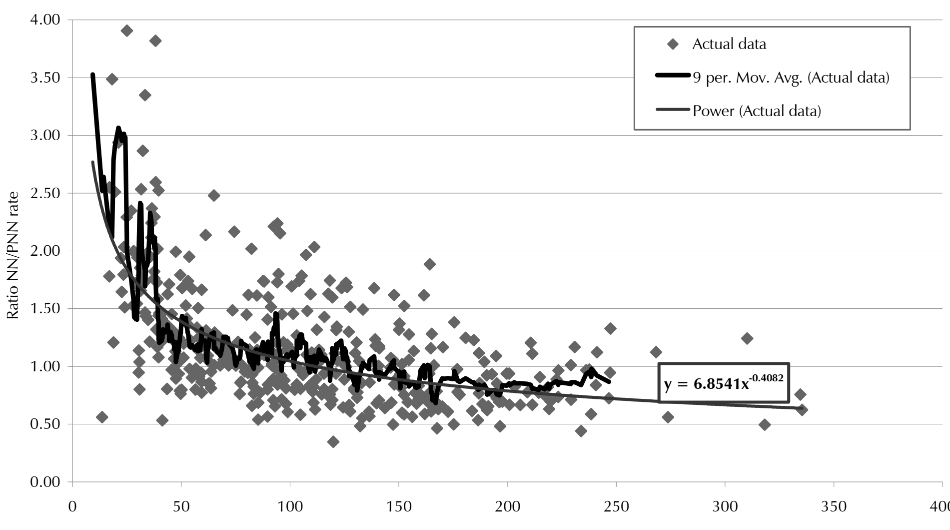
[3] Given that the sample size of the South zone was about one-third of the total sample, assuming the same perinatal mortality rate, it could be expected that the numbers of stillbirths and neonatal deaths would be about half that of the sample without the South zone, that is, an estimated 201 stillbirths and 205 neonatal deaths. The number of reported stillbirths in the South zone is 219, comparable to the estimated number of deaths, but the reported number of early neonatal deaths, 129, is below the estimated number. The conclusion is that early neonatal deaths in the South zone have been omitted rather than misclassified as stillbirths.

Perhaps a more sensitive indicator is the ratio of neonatal to postneonatal death. This ratio varies by level of under-5 mortality, as can be seen in Figure D.5, which charts the ratios observed in the periods 0-4 and 5-9 years prior to 209 DHS surveys. The overall average ratio of neonatal to postneonatal mortality is 1.23; that of Asian countries is 1.44; and that of South Asian countries (Bangladesh, India, Nepal, and Pakistan) is 1.78. A power curve fitted to the data[4] from the 209 surveys shows the predicted NN/PNN ratio that would be expected at any given under-5 mortality level. At the level of under-5 mortality found for Afghanistan excluding the South zone of 83 deaths per 1000 births, the predicted of the neonatal/postneonatal ratio is 1.13. The NN/PNN ratio actually observed for Afghanistan excluding the South zone is 0.80, considerably lower than the predicted ratio.

Table D.7 shows the estimated levels of neonatal, postneonatal, infant, and under-5 mortality rates for Afghanistan excluding the South zone under varying assumptions with respect to the neonatal/postneonatal death ratio. The three columns under "Adjusted values using NN/PNN" reflect the average ratio of the four South Asian countries, the average ratio for all DHS surveys, and the ratio predicted by the trend line given the under-5 mortality rate of Afghanistan excluding the South zone. The estimated numbers of neonatal deaths and the adjusted mortality rates taking into account each of the NN/PNN ratios are shown. For example, taking into account the ratio predicted by the trend line given the under-5 mortality rate actually reported for the region (1.13), under-5 mortality for Afghanistan excluding the South zone would be adjusted upwards to 91 deaths per 1,000 from the measured rate of 83.

Finally, the process of predicting NN/PNN ratios was repeated based on these adjusted ratios for each estimated under-5 mortality rate. The fifth column shows the final estimate of the NN/PNN ratio (1.09), where the estimated under-5 mortality rate converges so that the adjusted ratio and the implied ratio are consistent. The infant and under-5 mortality rates given by the final adjusted ratio are 71 and 90, respectively, assuming that the estimated increase in neonatal deaths is entirely due to omission.

***Figure D.5* Ratio of Neonatal (NN) to Postneonatal (PNN) Mortality Rates by Level of Under-5 Mortality for Periods 0-4 and 5-9 Years Prior to Survey, for 209 DHS Surveys**



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[4] NN/PNN = 6.8541*U5MR $^{(-0.408)}$, where NN/PNN is the neonatal to postneonatal mortality ratio and U5MR is the under-5 mortality rate.

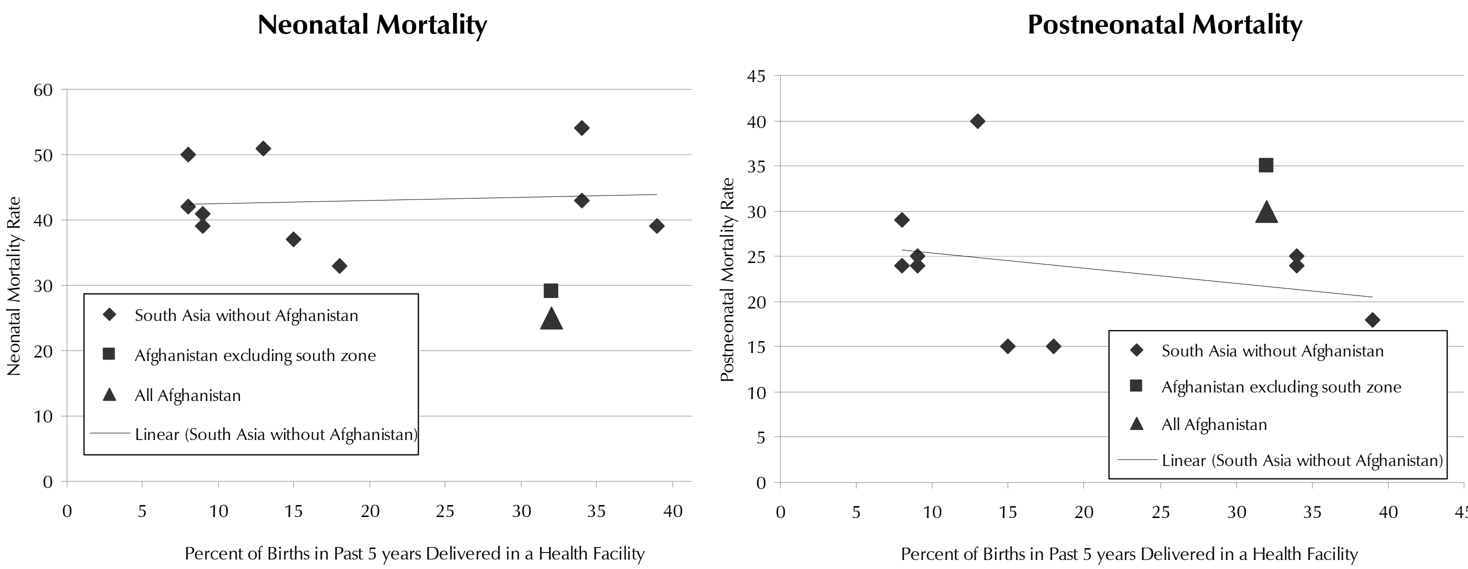
Table D.7 Estimated mortality rates by adjustment using ratio of neonatal to postneonatal deaths, Afghanistan excluding the South zone 2010					
		Adjusted values using NN/PNN for:			
		Asian countries[1]	All DHS surveys	Afghanistan excluding the South	Final value
	Measured	1.78	1.23	1.13	1.09
Neonatal deaths	589	1,191	823	756	729
Post-neonatal deaths	669				
Relative increase in neonatal deaths	1	2.02	1.40	1.28	1.24
Mortality rates if due to omission of neonatal deaths					
Neonatal	29	59	41	37	36
Infant	64	105	76	72	71
Under-5	83	124	95	91	90
NN/PNN according to trend line	1.13	0.96	1.07	1.09	1.09
If missing neonatal deaths due to age displacement					
Post neonatal deaths	669	67	435	502	529
Post neonatal mortality rate	35	5	23	27	28
NN/PNN ratio	0.88	10.92	1.73	1.39	1.28

[1] Bangladesh, India, Nepal and Pakistan

Table D.7 also examines the implications of an alternative assumption: that the lack of neonatal deaths is due only to misreporting of age at death. Applying this assumption to each scenario in the table reduces the number of postneonatal deaths and increases the number of neonatal deaths correspondingly, and new neonatal/postneonatal ratios are calculated. All four scenarios are inconsistent with just age misreporting, given that the new ratios are above those used for calculating the number of missing neonatal deaths.

Figure D.6 compares the neonatal and postneonatal mortality rates with those of South Asian DHS surveys, given the percentage of births delivered in a facility. The neonatal mortality rate for Afghanistan excluding the South zone is below the trend line, while the postneonatal mortality rate is above. This lends some support to the conclusion that some, although not the majority, of missing neonatal deaths may be due to an upward displacement in reported age at death of some neonates.

Figure D.6 Neonatal and Postneonatal Mortality Rates for Afghanistan Excluding the South Zone and For Other South Asian Countries, by Percentage of Deliveries Taking Place in Facilities



D.4 CONCLUSION

The quality of the mortality results for the South zone from all three data sources is severely compromised, and, thus, the data are unusable for producing mortality estimates. Any overall estimate of the levels of infant and child mortality needs to be based on the results for Afghanistan excluding the South zone—about two-thirds of country's population. Table D.8 gives the range of estimates for infant and under-5 mortality rates in Afghanistan excluding the South zone from the three data sources, without and with adjustments. Using the adjusted pregnancy history rates, the "best" estimate for the infant mortality rate, that is, the rate that is closest to the true mortality based on all relevant evidence, is 77 deaths per 1,000 births and the under-5 mortality rate is 97 per 1,000 births.

Table D.8 Measured and adjusted infant and under-5 mortality rates, Afghanistan excluding the South zone

Data source and adjustment	Infant mortality rate	Under-5 mortality rate
Pregnancy history		
Measured (0-4 years prior to survey)	64	83
Adjusted for omission of neonatal deaths (by NN/PNN ratio of 1.09)	71	90
Adjusted for omission at 0-1 years (rates for 2-6 years prior to survey)	67	87
Adjusted for both omission at 0-1 years and neonatal deaths (ratio of 1.09)	77	97
Household deaths and exposure		
Measured	76	97
Adjusted for sex ratio of deaths and exposure using Coale-Demeny West Model Life Table at level 18	67	92
Indirect children ever born-children surviving		
Measured	71	98
"Best" estimate	77	97

Given that estimates of mortality should not be produced directly for the South zone, the best that can be done to estimate the mortality rates for all of Afghanistan is to calculate a range based on assumed excess mortality in the South zone relative to that in the rest of Afghanistan. The results of this calculation are given in Table D.9, which uses the proportion of women 15-49 in the South zone sample (34.7 percent) to produce the results. For all of Afghanistan the rates would vary from a level of 77 to 84 for infant mortality and from 97 to 105 for under-5 mortality, depending on the assumption that is made with respect to the mortality pattern in the South zone.

Table D.9 Estimates for all of Afghanistan based on assumed mortality of South zone in excess of "Best" estimate for Afghanistan excluding the South zone

Percent excess mortality of South over rest of Afghanistan	South zone estimates: Infant mortality rate	South zone estimates: Under-5 mortality rate	All of Afghanistan: Infant mortality rate	All of Afghanistan: Under-5 mortality rate
+0%	77	97	77	97
+10%	85	107	80	100
+15%	89	112	81	102
+20%	92	116	82	104
+25%	96	121	84	105

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Dr. Habibshah	
Dr. Sajjad Anwar	
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Dr. Rasooly	

QUESTIONNAIRES

Appendix F

14 April 2010

AFGHANISTAN MORTALITY SURVEY
HOUSEHOLD QUESTIONNAIRE

THE MINISTRY OF PUBLIC HEALTH

IDENTIFICATION

VILLAGE / NEIGHBORHOOD [MUQTAA/MAHALA] ____________	
NAME OF HOUSEHOLD HEAD ____________	
CLUSTER NUMBER [SAHA SHOMOR]	
STRUCTURE NUMBER	
HOUSEHOLD NUMBER	

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	________	________	________	DAY MONTH YEAR
INTERVIEWER'S NAME	________	________	________	INT. NUMB.
RESULT*	________	________	________	RESULT
NEXT VISIT DATE:	________	________		TOTAL NUMBER OF VISITS
TIME:	________	________		

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
7 DWELLING VACANT OR ADDRESS NOT A DWELLING
8 DWELLING DESTROYED
9 DWELLING NOT FOUND
6 OTHER ____________
(SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN 12-49

NUMBER OF DEATHS SINCE 1 HAMMAL 1384

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	DATA ENTRY OPERATOR
NAME________	NAME________		

Introduction and Consent

Hello. My name is ______________________________________ and I am working with the Ministry of Public Health. 'We are conducting a survey about health all over Afghanistan.
Your household was selected for the survey. The questions usually take about 15 to 20 minutes

I would like to ask you some questions about your household. This information will help the government to plan health services.

We would very much appreciate your participation in this survey. Whatever information you provide will be kept strictly confidential.

No information identifying you or members of your household will ever be released to anyone outside of this survey.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your answers will help the government improve health services for Afghans.

At this time, do you want to ask me anything about the survey?

May I begin the interview now?

Signature of interviewer: Date:

RESPONDENT AGREES TO BE INTERVIEWED . . . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . . 2 → END

SECTION 1. HOUSEHOLD SCHEDULE

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY	SURVIVORSHIP OF BIOLOGICAL PARENTS		MIGRATION TO HOUSEHOLD		INPATIENT		OUTPATIENT	
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR ALL PERSONS, ASK QUESTIONS 102A-102C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 105-116 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF AGE 95 OR MORE, RECORD 95'. IF AGE LESS THAN 1 YEAR RECORD '00'	CIRCLE LINE NUMBER OF ALL WOMEN AGE 12-49	Is (NAME)'s natural mother alive?	Is (NAME)'s natural father alive?	Has (NAME) lived here since 1 Hammal 1384?	In what month and year did (NAME) move in?	In the last 12 months, was (NAME) admitted overnight to stay at a health facility?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR IN-PATIENT SECTION	In the last 30 days, did (NAME) receive care from any source, without staying overnight?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR OUT-PATIENT SECTION
(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)	(112)	(113)	(114)	(115)	(116)
01		0 1	M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	01	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	01	Y N DK 1 2 8 GO TO (2)	01
02			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	02	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	02	Y N DK 1 2 8 GO TO (3)	02
03			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	03	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	03	Y N DK 1 2 8 GO TO (4)	03
04			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	04	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	04	Y N DK 1 2 8 GO TO (5)	04
05			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	05	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	05	Y N DK 1 2 8 GO TO (6)	05
06			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	06	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	06	Y N DK 1 2 8 GO TO (7)	06
07			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	07	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	07	Y N DK 1 2 8 GO TO (8)	07
08			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	08	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	08	Y N DK 1 2 8 GO TO (9)	08
09			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	09	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	09	Y N DK 1 2 8 GO TO (10)	09
10			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	10	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	10	Y N DK 1 2 8 GO TO (11)	10
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	11	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	11	Y N DK 1 2 8 GO TO (12)	11
12			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	12	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	12	Y N DK 1 2 8 GO TO (13)	12
13			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	13	Y N 1 2	Y N 1 2	Y N 1 2 GO TO Q.113	MONTH YEAR	Y N DK 1 2 8 GO TO Q.115	13	Y N DK 1 2 8 GO TO Q.201	13

TICK HERE IF CONTINUATION SHEET USED ☐

102A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

102B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

102C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q.103: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

SECTION 2. MIGRATION FROM HOUSEHOLD

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask you some questions about members of this household who lived here in 1 Hammal 1384 but who have since moved away. Are there any members of your household who lived here in 1 Hammal 1384 but who have since moved away?	YES . . . . 1 NO . . . . 2 DON'T KNOW . . . 8	2, 8 → 301A

LINE NO.	MIGRANTS	SEX	MONTH AND YEAR MOVED AWAY	AGE	REASONS FOR MOVING
	Please tell me the names of the persons who have moved away? AFTER LISTING THE NAMES AND RECORDING 'THE SEX FOR EACH PERSON, ASK QUESTIONS 205-207 FOR EACH PERSON	Is (NAME) male or female?	In what month and year did s/he move away?	How old was (NAME) when s/he moved away? IF AGE 95 OR MORE, RECORD 95'. IF AGE LESS THAN 1 YEAR RECORD '00'	What was the main reason that (NAME) moved away?
(202)	(203)	(204)	(205)	(206)	(207)
01	NAME ______	M 1 F 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YEARS [ ][ ]	WORK . . . . 1 SCHOOL . . . . . . 2 FAMILY . . . . 3 SECURITY 4 DON'T KNOW . . . . 8 OTHER ______ 6 (SPECIFY)
02	NAME ______	M 1 F 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YEARS [ ][ ]	WORK . . . . 1 SCHOOL . . . . . . 2 FAMILY . . . . 3 SECURITY 4 DON'T KNOW . . . . 8 OTHER ______ 6 (SPECIFY)
03	NAME ______	M 1 F 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YEARS [ ][ ]	WORK . . . . 1 SCHOOL . . . . . . 2 FAMILY . . . . 3 SECURITY 4 DON'T KNOW . . . . 8 OTHER ______ 6 (SPECIFY)
04	NAME ______	M 1 F 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YEARS [ ][ ]	WORK . . . . 1 SCHOOL . . . . . . 2 FAMILY . . . . 3 SECURITY 4 DON'T KNOW . . . . 8 OTHER ______ 6 (SPECIFY)
05	NAME ______	M 1 F 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YEARS [ ][ ]	WORK . . . . 1 SCHOOL . . . . . . 2 FAMILY . . . . 3 SECURITY 4 DON'T KNOW . . . . 8 OTHER ______ 6 (SPECIFY)

TICK HERE IF CONTINUATION SHEET USED [ ]

208	CHECK Q203 AND SUM ALL PERSONS LISTED HERE AND ON CONTINUATION SHEET, IF ANY. TOTAL NUMBER OF PERSONS IN HOUSEHOLD WHO HAVE MOVED AWAY SINCE 1 HAMMAL 1384.	[ ][ ]

SECTION 3. HOUSEHOLD DEATHS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301A	Now I would like to ask you a few more questions about your household. Has any usual resident of your household died since 1 Hammal 1384?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	1 → 301C
301B	Was there any birth since 1 Hammal 1384 where the baby showed signs of life at birth (such as crying, breathing, or movement) but died soon after?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
301C	Was there any pregnancy since 1 Hammal 1384 that ended in a stillbirth- that is, where the baby never showed any signs of life (such as crying, breathing, or movement)?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
	CHECK Q.301A, 301B, and 301C: IF ANY YES CODE '1' CIRCLED ☐	IF ALL NO OR DON'T KNOW CODE '2' OR '8' CIRCLED ☐	→ 401
302	ASK Qs.304-308 AS APPROPRIATE FOR EACH PERSON WHO DIED. IF THERE WERE MORE THAN 3 DEATHS, USE ADDITIONAL QUESTIONNAIRE(S).		

NO.					
303	COLUMN NO.	1	2	3	
304	What was the name of the person who died most recently (before him/her)?	________	________	________	
305	How old was (NAME) when he/she died? IF '1' YEAR PROBE: How many months old was (NAME) when he/she died? IF '1' MONTH PROBE: How many days old was (NAME) when he/she died? IF STILLBIRTH CIRCLE '1' AND RECORD AGE IN DAYS AS '00'. RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN 1 YEAR, AND COMPLETED YEARS IF 1 YEAR OR MORE	DAYS . . . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . . 3 ☐☐	DAYS . . . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . . 3 ☐☐	DAYS . . . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . . 3 ☐☐	
306	Was (NAME) male or female?	MALE . . . 1 FEMALE . . . 2	MALE . . . 1 FEMALE . . . 2	MALE . . . 1 FEMALE . . . 2	
307	CHECK Q.305: WHICH VERBAL AUTOPSY QUESTIONNAIRE SHOULD BE ADMINISTERED.	0 - 28 DAYS . . . 1 29 DAYS TO 11 YRS . . . 2 12 YRS AND ABOVE . . . 3	0 - 28 DAYS . . . 1 29 DAYS TO 11 YRS . . . 2 12 YRS AND ABOVE . . . 3	0 - 28 DAYS . . . 1 29 DAYS TO 11 YRS . . . 2 12 YRS AND ABOVE . . . 3	
308	NAME AND LINE NUMBER OF THE MOTHER FROM Q.101 AND Q.102 . IF SHE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	LINE NUMBER ☐☐ ________ (NAME)	LINE NUMBER ☐☐ ________ (NAME)	LINE NUMBER ☐☐ ________ (NAME)	
309	Has any other member of your household died since 1 Hammal 1384?	YES . . . 1 GO TO Q.304 IN NEXT COLUMN NO . . . 2 DK . . . 8	YES . . . 1 GO TO Q.304 IN NEXT COLUMN NO . . . 2 DK . . . 8	YES . . . 1 GO TO Q.304 ON NEW QUEST. NO . . . 2 DK . . . 8	

TICK HERE IF ADDITIONAL QUESTIONNAIRES USED ☐

NO.			
310	CHECK Q304 AND SUM ALL PERSONS LISTED HERE AND ON CONTINUATION SHEET, IF ANY. TOTAL NUMBER OF PERSONS IN HOUSEHOLD WHO DIED SINCE 1 HAMMAL 1384. . . . . ☐☐		
311	CHECK Q.310: IF 1 OR MORE DEATHS ☐	IF NO DEATHS ☐	→ 401
	READ TO THE RESPONDENT: After this interview we would like to get more information on the circumstances surrounding this/these death(s) so that the government can provide health services to help reduce these deaths.		

SECTION 4. INPATIENT HEALTH EXPENDITURES

401	CHECK Q.114: ONE OR MORE INPATIENTS ☐ ↓ NO INPATIENTS ☐ → 501			
	CHECK QS.102,114: ENTER LINE NUMBER AND NAME OF EACH HOUSEHOLD MEMBER WHO WAS AN INPATIENT. READ: Now I would like to ask some questions about the household members who stayed overnight in a health facility in the last 12 months.			
402	LINE NUMBER FROM Q.114 IN HOUSEHOLD SCHEDULE NAME FROM Q.102	INPATIENT 1 LINE NUMBER . . . . ☐☐ ________	INPATIENT 2 LINE NUMBER . . . . ☐☐ ________	INPATIENT 3 LINE NUMBER . . . . ☐☐ ________
403	How many times did [NAME] get admitted in a health facility in the last 12 months.	NUMBER OF TIMES . . . . ☐☐☐	NUMBER OF TIMES . . . . ☐☐☐	NUMBER OF TIMES . . . . ☐☐☐
404	Where did (NAME) most recently stay overnight for health care? IF THE FACILITY IS A HOSPITAL OR CLINIC WRITE THE NAME OF THE PLACE. PROBE FOR THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. ________ NAME OF FACILITY 1ST INPATIENT ________ NAME OF FACILITY 2ND INPATIENT ________ NAME OF FACILITY 3RD INPATIENT	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 OTHER ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 OTHER ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 OTHER ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)
405	For the most recent inpatient care for [NAME] what was the total cost? This includes costs associated with [NAME] going to and from the inpatient facility, costs for the inpatient room, health service providers, medicines, diagnostic tests, and other costs such as for food for [NAME] while an inpatient.	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 410) ← DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 410) ← DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 410) ← DON'T KNOW 999998
406	How much of this total cost, was paid for just medicines?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998
407	How much of this total cost, was paid for just diagnostic services (ex. lab test, x-ray)?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998
408	How much of this total cost was paid for transportation (non-ambulance), to and from the inpatient facility and home?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW . 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998
409	How much of this total cost was paid for food and accom-modation when traveling to and from home, or for food while in the facility?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 DON'T KNOW 999998

410	Were any non-monetary payments made for the costs associated with the inpatient care for [NAME]? These would include gifts in-kind or payments made in goods.	YES . . . . 1 NO . . . . 2 (SKIP TO 412) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 412) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 412) DON'T KNOW 8
411	What is the value of the gifts or in-kind payments in Afghani? PROBE TO GET A MONETARY ESTIMATE	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE . . . . 000000 DON'T KNOW 999998
412	How many nights did (NAME) stay overnight during this visit?	NUMBER OF NIGHTS [ ][ ][ ]	NUMBER OF NIGHTS [ ][ ][ ]	NUMBER OF NIGHTS [ ][ ][ ]
	CHECK	GO BACK TO Q.402 IN NEXT COLUMN. OR IF NO MORE INPATIENTS GO TO Q413.	GO BACK TO Q.402 IN NEXT COLUMN. OR IF NO MORE INPATIENTS GO TO Q413.	GO TO Q402 ON NEW QUEST. OR IF NO MORE INPATIENTS GO TO Q413.
	TICK HERE IF ADDITIONAL QUESTIONNAIRES USED [ ]			
413	CHECK Q402 AND SUM ALL PERSONS LISTED HERE AND ON CONTINUATION SHEET, IF ANY. TOTAL NUMBER OF PERSONS IN HOUSEHOLD WHO HAD AN INPATIENT ADMISSION. [ ]			

SECTION 5. OUTPATIENT HEALTH EXPENDITURES

501	CHECK Q.116: ONE OR MORE OUTPATIENTS ☐ ↓		NO OUTPATIENTS ☐ → 513	
	CHECK Q.102 AND Q.116: ENTER LINE NUMBER AND NAME OF EACH HOUSEHOLD MEMBER WHO WAS AN OUTPATIENT. Now I would like to ask you about how much your household and all its members spent on health services in the last 30 days.			
502	LINE NUMBER FROM Q.116 IN HOUSEHOLD SCHEDULE NAME FROM Q.102	OUTPATIENT 1 LINE NUMBER . . . . ☐☐ ________	OUTPATIENT 2 LINE NUMBER . . . . ☐☐ ________	OUTPATIENT 3 LINE NUMBER . . . . ☐☐ ________
503	Where did (NAME) get care or treatment most recently without staying overnight? IF THE FACILITY IS A HOSPITAL OR CLINIC WRITE THE NAME OF THE PLACE. ________ NAME OF FACILITY (1ST. OUTPATENT) ________ NAME OF FACILITY (2ND. OUTPATENT) ________ NAME OF FACILITY (3RD. OUTPATENT)	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 BASIC HEALTH CENTER . 27 SUB-HEALTH CENTER . . . . 28 HEALTH POST . . . . 29 MOBILE CLINIC . . . . 30 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 PRIVATE DOCTOR'S OFFICE 33 PHARMACY . . . . 34 COUNSELLING CENTER/ DRUG ABUSE . . . . 35 OTHER ________ 36 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS 41 MOSQUE 42 REFUGEE CAMP . . . . 43 SHOP . . . . 44 TRADITIONAL PRACTIONER/ MULLAH/UNANI . . . . 45 OTHER ________ 46 (SPECIFY)	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 BASIC HEALTH CENTER . 27 SUB-HEALTH CENTER . . . . 28 HEALTH POST . . . . 29 MOBILE CLINIC . . . . 30 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 PRIVATE DOCTOR'S OFFICE 33 PHARMACY . . . . 34 COUNSELLING CENTER/ DRUG ABUSE . . . . 35 OTHER ________ 36 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS 41 MOSQUE 42 REFUGEE CAMP . . . . 43 SHOP . . . . 44 TRADITIONAL PRACTIONER/ MULLAH/UNANI . . . . 45 OTHER ________ 46 (SPECIFY)	PUBLIC NATIONAL HOSP. . . . . 21 REGIONAL HOSP . . . . 22 PROVINCIAL HOSP . . . . 23 DISTRICT HOSP . . . . 24 CHC/POLYCLINIC . . . . 25 BASIC HEALTH CENTER . 27 SUB-HEALTH CENTER . . . . 28 HEALTH POST . . . . 29 MOBILE CLINIC . . . . 30 OTHER ________ 26 (SPECIFY) PRIVATE PVT. HOSPITAL . . . . 31 PVT. CLINIC . . . . 32 PRIVATE DOCTOR'S OFFICE 33 PHARMACY . . . . 34 COUNSELLING CENTER/ DRUG ABUSE . . . . 35 OTHER ________ 36 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS 41 MOSQUE 42 REFUGEE CAMP . . . . 43 SHOP . . . . 44 TRADITIONAL PRACTIONER/ MULLAH/UNANI . . . . 45 OTHER ________ 46 (SPECIFY)
504	For the most recent outpatient care for [NAME] what was the total cost? This includes costs associated with [NAME] going to and from the site where care or treatment was received, costs for any treatment, medicines, diagnostic test, and any other costs.	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 509) DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 509) DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/FREE . . . . 000000 (SKIP TO 509) DON'T KNOW 999998
505	How much of this total cost, was paid for just medicines?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998
506	How much of this total cost, was paid for just diagnostic services (ex. lab test, x-ray)?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998
507	How much of this total cost was paid for transportation (non-ambulance), to and from home?	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998	TOTAL COST AFGHANI ☐☐☐☐☐☐ NO COST/ FREE . . . . 000000 DON'T KNOW 999998

		OUTPATIENT 1	OUTPATIENT 2	OUTPATIENT 3
508	How much of this total cost was paid for food and accomodation when traveling to and from home, or for food while seeking outpatient care?	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998
509	Were any non-monetary payments made for the costs associated with the outpatient care for [NAME]? These would include gifts in-kind or payments made in goods.	YES .... 1 NO .... 2 (SKIP TO 511) DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 511) DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 511) DON'T KNOW 8
510	What is the value of the gifts or in-kind payments in Afghani? PROBE TO GET A MONETARY ESTIMATE	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/ FREE .... 000000 DON'T KNOW 999998
511	In total, how many different times did (NAME) get outpatient care during the past 30 days, without staying overnight.	NUMBER OF OUTPATIENT VISITS [ ][ ][ ]	NUMBER OF OUTPATIENT VISITS [ ][ ][ ]	NUMBER OF OUTPATIENT VISITS [ ][ ][ ]
	CHECK	GO BACK TO Q.502 IN NEXT COLUMN OR IF NO MORE OUTPATIENTS GO TO Q.'512	GO BACK TO Q.504 IN NEXT COLUMN OR IF NO MORE OUTPATIENTS GO TO Q.512	GO TO Q502 ON NEW QUESTIONNAIRE. OR IF NO MORE OUTPATIENTS 'GO TO Q.512

TICK HERE IF ADDITIONAL QUESTIONNAIRES USED [ ]

512	CHECK Q502 AND SUM ALL PERSONS LISTED HERE AND ON CONTINUATION SHEET, IF ANY. TOTAL NUMBER OF PERSONS IN HOUSEHOLD WHO RECEIVED OUTPATIENT CARE. [ ]	
513	In the last 3 months, how much did your household spend on health-related items such as drugs, vitamins, herbal treatments, family planning methods, and other such items?	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE .... 000000 DON'T KNOW 999998
514	In the last 3 months, how much did your household spend on prescription glasses and vision products?	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE .... 000000 DON'T KNOW 999998
515	In the last 3 months, how much did your household spend on hearing aids, canes and other prosthetic devices?	TOTAL COST AFGHANI [ ][ ][ ][ ][ ][ ] NO COST/FREE .... 000000 DON'T KNOW 999998
516	In the last 3 months, have you or anyone in your household faced financial difficulties in paying for medical costs?	YES .... 01 NO .... 02 → 601
517	What did you or your household member have to do to pay for the medical costs? PROBE: Anything else?	SELL ASSETS .... A BORROW MONEY .... B OTHER ______ X (SPECIFY)

SECTION 6. HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
601	What is the main source of drinking water for members of your household?	PIPED WATER			
		PIPED INTO DWELLING		11	
		PIPED TO YARD/PLOT		12	
		PUBLIC TAP/STANDPIPE		13	
		TUBE WELL OR BOREHOLE		21	
		DUG WELL			
		PROTECTED WELL		31	
		UNPROTECTED WELL		32	
		WATER FROM SPRING			
		PROTECTED SPRING		41	
		UNPROTECTED SPRING		42	
		RAINWATER		51	
		TANKER TRUCK		61	
		CART WITH SMALL TANK		71	
		SURFACE WATER (RIVER/DAM/LAKE/POND/ STREAM/CANAL/IRRIGATION CHANNEL		81	
		BOTTLED WATER		91	
		OTHER ______ (SPECIFY)		96	
602	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET			
		FLUSH TO PIPED SEWER SYSTEM		11	
		FLUSH TO SEPTIC TANK		12	
		FLUSH TO PIT LATRINE		13	
		FLUSH TO SOMEWHERE ELSE		14	
		FLUSH, DON'T KNOW WHERE		15	
		PIT LATRINE			
		VENTILATED IMPROVED PIT LATRINE		21	
		PIT LATRINE WITH SLAB		22	
		PIT LATRINE WITHOUT SLAB/OPEN PIT		23	
		NO FACILITY/BUSH/FIELD		31	→ 604
		OTHER ______ (SPECIFY)		96	
603	Do you share this toilet facility with other households?	YES		1	
		NO		2	
604	Does your household have:		YES	NO	
	a) Electricity?	a) ELECTRICITY	1	2	
	b) A radio?	b) RADIO	1	2	
	c) A television?	c) TELEVISION	1	2	
	d) A mobile telephone?	d) MOBILE TELEPHONE	1	2	
	e) A non-mobile telephone?	e) NON-MOBILE TELEPHONE	1	2	
	f) A stand fan?	f) STAND FAN	1	2	
	g) A mattress?	g) MATTRESS	1	2	
	h) A cabinet/almirah?	h) CABINET/ALMIRAH	1	2	
	i) A generator?	i) GENERATOR	1	2	
	j) A refrigerator?	j) REFRIGERATOR	1	2	
605	What type of fuel does your household mainly use for cooking?	ELECTRICITY		01	
		LPG/CYLINDER		02	
		NATURAL GAS/PIPED		03	
		KEROSENE		04	
		COAL, LIGNITE		05	
		CHARCOAL		06	
		WOOD		07	
		STRAW/SHRUBS/GRASS		08	
		AGRICULTURAL CROP		09	
		ANIMAL DUNG		10	
		NO FOOD COOKED IN HOUSEHOLD		95	
		OTHER ______ (SPECIFY)		96	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
606	MAIN MATERIAL OF THE FLOOR RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND ..... 11 DUNG ..... 12 MUD AND HAY ..... 13 RUDIMENTARY FLOOR WOOD PLANKS ..... 21 FINISHED FLOOR PARQUET OR POLISHED WOOD ..... 31 VINYL OR PLASTIC STRIPS ..... 32 CERAMIC TILES ..... 33 CEMENT ..... 34 CARPET 41 OTHER ________ 96 (SPECIFY)	
607	MAIN MATERIAL OF THE ROOF RECORD OBSERVATION.	NATURAL ROOFING NO ROOF ..... 11 THATCH/BUSHES/GRASS ..... 12 SOD/MUD WITH GRASS ..... 13 RUDIMENTARY ROOFING RUSTIC MAT/MUD WITH HAY ..... 21 WOOD PLANKS ..... 22 CARDBOARD/CLOTH/TENT ..... 23 FINISHED ROOFING METAL ..... 31 WOOD/TIMBER ..... 32 CERAMIC TILES ..... 33 CEMENT/BRICKS ..... 34 ROOFING SHINGLES ..... 35 OTHER ________ 96 (SPECIFY)	
608	MAIN MATERIAL OF THE EXTERIOR WALLS RECORD OBSERVATION.	NATURAL WALLS NO WALLS ..... 11 PREPARED MUD ..... 12 DIRT ..... 13 RUDIMENTARY WALLS HAY WITH MUD ..... 21 STONE WITH MUD ..... 22 UNCOVERED ADOBE ..... 23 PLYWOOD ..... 24 CARDBOARD/CLOTH/TENT 25 REUSED WOOD ..... 26 FINISHED WALLS CEMENT ..... 31 STONE WITH LIME/CEMENT ..... 32 CEMENT/BRICKS ..... 33 COVERED ADOBE ..... 34 WOOD PLANKS/SHINGLES ..... 35 OTHER ________ 96 (SPECIFY)	
609	How many rooms in this household are used for sleeping?	ROOMS ..... [ ][ ]	
610	Does any member of this household own: a) A watch? b) A bicycle? c) A tractor? d) A motorcycle or motor scooter? e) An animal-drawn cart? f) A car or truck? g) A rickshaw?	YES NO a) WATCH ..... 1 2 b) BICYCLE ..... 1 2 c) TRACTOR ..... 1 2 d) MOTORCYCLE/SCOOTER ..... 1 2 e) ANIMAL-DRAWN CART ..... 1 2 f) CAR/TRUCK ..... 1 2 g) RICKSHAW 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
611	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	 → 613
612	How many ser/biswa/jerab of agricultural land do members of this household own? IF 995 OR MORE, WRITE 995.	SER 1 [ ][ ][ ] BISWAS 2 [ ][ ][ ] JERAB 3 [ ][ ][ ] DON'T KNOW 9998	
613	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	 → 615
614	How many of the following animals does this household own? IF NONE, ENTER '00'. IF 95 OR MORE, ENTER '95'. IF UNKNOWN, ENTER '98'. a) Cattle? b) Milk cows or bulls? c) Horses, donkeys, mules or camels? d) Goats? e) Sheep? f) Chickens?	 a) CATTLE . . . . . [ ][ ] b) COWS/BULLS . . . . . [ ][ ] c) HORSE/DONKEY/MULE/CAMEL . . . . . [ ][ ] d) GOATS . . . . . [ ][ ] e) SHEEP . . . . . [ ][ ] f) CHICKENS . . . . . [ ][ ]	
615	Does any member of this household have a bank account?	YES . . . . . 1 NO 2	
616	To which ethnic group does (NAME OF HEAD OF HOUSEHOLD) belong?	PASHTUN . . . . . 01 TAJIK . . . . . 02 HAZARA . . . . . 03 UZBEK . . . . . 04 TURKMEN . . . . . 05 NURISTANI . . . . . 06 BALOCH . . . . . 07 PASHAI . . . . . 08 OTHER ________ 96 (SPECIFY)	

April 14 2010

AFGHANISTAN MORTALITY SURVEY
WOMAN'S QUESTIONNAIRE

THE MINISTRY OF PUBLIC HEALTH

IDENTIFICATION

VILLAGE / NEIGHBORHOOD [MUQATAA / MAHALAH] ______________

NAME OF HOUSEHOLD HEAD ______________

CLUSTER NUMBER [SAHA SHOMOR] . . . .

STRUCTURE NUMBER . . . .

HOUSEHOLD NUMBER . . . .

LINE NUMBER AND NAME OF WOMAN FROM HOUSEHOLD QUESTIONNAIRE

____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	______	______	______	DAY MONTH YEAR
INTERVIEWER'S NAME	______	______	______	INT. NUM.
RESULT*	______	______	______	RESULT
NEXT VISIT: DATE TIME	______ ______	______ ______		TOTAL NUMBER OF VISITS

*RESULT CODES:
1 COMPLETED
2 NOT AT HOME AT TIME OF VISIT
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
7 INCAPACITATED
6 OTHER ______________
(SPECIFY)

LANGUAGE OF INTERVIEW

LANGUAGE OF QUESTIONNAIRE: 3 LANGUAGE OF INTERVIEW: LANGUAGE OF RESPONDENT

LANGUAGE CODES: PASHTU = 1, DARI = 2, ENGLISH = 3, OTHER = 4 ______________
(SPECIFY)

TRANSLATOR USED: (YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME ______	NAME ______		

Introduction and Consent

Hello. My name is ______________________________________ and I am working with the Ministry of Public Health. We are conducting a survey about health all over Afghanistan. Your household was selected for the survey. The questions usually take about 30-45 minutes.

We are collecting information on women's health in the community. This information will help the government to plan health services. We would very much appreciate your participation in this survey. As part of the survey we would first like to ask some questions about your health and your family. Whatever information you provide will be kept strictly confidential. No information identifying you or your family will ever be released to anyone outside of this survey.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your answers will help the government improve health services for Afghans.

At this time, do you want to ask me anything about the survey?

May I begin the interview now?

Signature of interviewer: ________________________________ Date: ____________________

RESPONDENT AGREES TO BE INTERVIEWED . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. MORNING=1 EVENING=2	MORNING/EVENING . . . . . HOUR . . . . MINUTES	
	COLLECT ANY RELEVANT DOCUMENTS THAT MAY HAVE INFORMATION ON THE RESPONDENT AND HER CHILDREN'S AGE AND DATE OF BIRTH FOR EXAMPLE : TT CARD, ANC CARD, CHILD VACCINATION CARD, BIRTH CERTIFICATE, REGISTRATION CERTIFICATE, ETC.		
102	In what month and year were you born?	MONTH . . . . DON'T KNOW MONTH . . . . 98 YEAR . . . . DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT Q.102 AND/OR Q.103 IF INCONSISTENT.	AGE IN COMPLETED YEARS	
104	Have you ever attended school?	YES . . . . 1 NO 2	 → 107
105	What is the highest level of school you attended: primary, secondary, higher or madrassa?	PRIMARY . . . . 1 SECONDARY . . . . 2 HIGHER . . . . 3 MADRASSA 4	
106	What is the highest standard you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'	STANDARD	
107	To which ethnic group do you belong?	PASHTUN . . . . 01 TAJIK . . . . 02 HAZARA . . . . 03 UZBEK . . . . 04 TURKMEN . . . . 05 NURISTANI . . . . 06 BALOCH . . . . 07 PASHAI . . . . 08 OTHER ______________ 96 (SPECIFY)	

SECTION 2. MARITAL STATUS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Are you currently married?	YES, CURRENTLY MARRIED . . . . 1 NO, NOT CURRENTLY MARRIED 2	1 → 203A
202	Have you ever been married?	YES, FORMERLY MARRIED . 1 NO 2	2 → 601
203	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . 1 DIVORCED . . . . 2 SEPARATED 3	1, 2, 3 → 205
203A	NAME AND LINE NUMBER OF HUSBAND FROM HOUSEHOLD QUESTIONNAIRE Q.101 AND Q.102	NAME ________________ ☐☐	
204	Is your husband living with you now or is he staying elsewhere?	STAYING ELSEWHERE . . . . . 1 LIVING WITH HER 2	
205	Have you been married only once or more than once?	ONLY ONCE . . . . 1 MORE THAN ONCE 2	
206	CHECK Q.205: MARRIED ONLY ONCE ☐ ↓ In what month and year did you start living with your husband? MARRIED MORE THAN ONCE ☐ ↓ Now I would like to ask about your first husband. In what month and year did you start living with him?	MONTH . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	YEAR → 208
207	How old were you when you first started living with him?	AGE . . . . ☐☐	
208	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY. Now I would like to ask a question about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . 00 AGE IN YEARS . . . . ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND 95	00 → 601

SECTION 3. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . . 1 NO 2	 → 306
302	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . . 1 NO 2	 → 304
303	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . DAUGHTERS AT HOME .	
304	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . . 1 NO 2	 → 306
305	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . DAUGHTERS ELSEWHERE	
306	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . . 1 NO 2	 → 308
307	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . GIRLS DEAD	
308	Have you ever had a stillbirth, that is, where the baby was not born alive?	YES . . . . . . 1 NO 2	 → 310
309	How many stillbirths have you had in your lifetime?	NUMBER OF STILLBIRTHS	
310	SUM ANSWERS TO Q.303, Q.305, Q.307, AND Q309 AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL	
311	CHECK Q.310 Just to make sure that I have this right: you have had (TOTAL IN Q310) births (and stillbirths) during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT Qs.303-309 AS NECESSARY.		
312	CHECK 310: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐		→ 501

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL BIRTHS IN Q.313. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS.
(IF THERE ARE MORE THAN 16 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

313	314	315	316	317	318	319	320	321	322	323	324	325	326
What name was given to your first/next child?	CHECK Q308: NO STILL-BIRTHS → 315 IF ANY STILL-BIRTHS, ASK: Was the baby born alive or born dead?	Is (NAME) a boy or a girl?	Were any of these births twins?	In what month and year was (NAME) born? PROBE: What is his/her birthday?	Is (NAME) still alive?	How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	Is (NAME) living with you?	RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD)	In what month and year did (NAME) die?	How old was (NAME) when he/she died? IF '1 YEAR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN ONE MONTH; MONTHS IF LESS THAN 2 YEARS; OR YEARS	In what month and year did the stillbirth occur?	How many months did this pregnancy last? RECORD IN COMPLETED MONTHS	Were there any other births between (NAME OF PREVIOUS BIRTH) and (NAME) including any children who died soon after birth or were still born?
01	ALIVE . . . . . . 1 DEAD . . . . . . 2 → 324	BOY . . 1 GIRL . . 2	SINGLE . . . . 1 MULTIPLE . . 2	MONTH YEAR	YES . . . . 1 NO . . . . 2 → 322	AGE IN YEARS	YES . . . . 1 NO 2	LINE NUMBER (NEXT BIRTH)	MONTH YEAR	DAYS 1 MONTHS . 2 YEARS 3 (NEXT BIRTH)	MONTH YEAR	MONTHS	
02	ALIVE . . . . . . 1 DEAD . . . . . . 2 → 324	BOY . . 1 GIRL . . 2	SINGLE . . . . 1 MULTIPLE . . 2	MONTH YEAR	YES . . . . 1 NO . . . . 2 → 322	AGE IN YEARS	YES . . . . 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH
03	ALIVE . . . . . . 1 DEAD . . . . . . 2 → 324	BOY . . 1 GIRL . . 2	SINGLE . . . . 1 MULTIPLE . . 2	MONTH YEAR	YES . . . . 1 NO . . . . 2 → 322	AGE IN YEARS	YES . . . . 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH
04	ALIVE . . . . . . 1 DEAD . . . . . . 2 → 324	BOY . . 1 GIRL . . 2	SINGLE . . . . 1 MULTIPLE . . 2	MONTH YEAR	YES . . . . 1 NO . . . . 2 → 322	AGE IN YEARS	YES . . . . 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH
05	ALIVE . . . . . . 1 DEAD . . . . . . 2 → 323	BOY . . 1 GIRL . . 2	SINGLE . . . . 1 MULTIPLE . . 2	MONTH YEAR	YES . . . . 1 NO . . . . 2 → 322	AGE IN YEARS	YES . . . . 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH

Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL BIRTHS IN Q.313. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS.
(IF THERE ARE MORE THAN 16 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

313	314	315	316	317	318	319	320	321	322	323	324	325	326
What name was given to your first/next child?	CHECK Q308: NO STILL-BIRTHS → 315 IF ANY STILL-BIRTHS, ASK: Was the baby born alive or born dead?	Is (NAME) a boy or a girl?	Were any of these births twins?	In what month and year was (NAME) born? PROBE: What is his/her birthday?	Is (NAME) still alive?	How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	Is (NAME) living with you?	RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD)	In what month and year did (NAME) die?	How old was (NAME) when he/she died? IF '1 YEAR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN ONE MONTH; MONTHS IF LESS THAN 2 YEARS; OR YEARS	In what month and year did the stillbirth occur?	How many months did this pregnancy last? RECORD IN COMPLETED MONTHS	Were there any other births between (NAME OF PREVIOUS BIRTH) and (NAME) including any children who died soon after birth or were still born?
06	ALIVE ...... 1 DEAD ...... 2 → 324	BOY .. 1 GIRL .. 2	SINGLE .... 1 MULTIPLE .. 2	MONTH YEAR	YES .... 1 NO .... 2 → 322	AGE IN YEARS	YES .... 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH
07	ALIVE ...... 1 DEAD ...... 2 → 324	BOY .. 1 GIRL .. 2	SINGLE .... 1 MULTIPLE .. 2	MONTH YEAR	YES .... 1 NO .... 2 → 322	AGE IN YEARS	YES .... 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH
08	ALIVE ...... 1 DEAD ...... 2 → 324	BOY .. 1 GIRL .. 2	SINGLE .... 1 MULTIPLE .. 2	MONTH YEAR	YES .... 1 NO .... 2 → 322	AGE IN YEARS	YES .... 1 NO 2	LINE NUMBER (GO TO 326)	MONTH YEAR	DAYS 1 MONTHS 2 YEARS 3 (GO TO 326)	MONTH YEAR	MONTHS	YES 1 ADD BIRTH NO 2 NEXT BIRTH

TICK HERE IF ADDITIONAL QUESTIONNAIRES USED ☐

327	Have you had any live births or stillbirths since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH (S) IN TABLE.	YES .... 1 NO 2
328	COMPARE Q.310 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME ☐ NUMBERS ARE DIFFERENT ☐ → (PROBE AND RECONCILE)	
329	CHECK Q.322 AND Q.324: ENTER THE NUMBER OF DEATHS AND STILLBIRTHS SINCE 1 HAMMAL 1386 OR LATER. IF NONE, ENTER '0' FOR EACH DEATH OR STILLBIRTH SINCE HAMMAL 1386 CHECK TO MAKE SURE A VAQ HAS BEEN COMPLETED.	☐
330	CHECK 317 AND 324: ENTER THE NUMBER OF BIRTHS AND STILLBIRTHS SINCE 1 HAMMAL 1384 OR LATER. IF NONE, ENTER '0C	☐☐

SECTION 4. ANTENATAL, DELIVERY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	CHECK Q.330: ONE OR MORE BIRTHS OR STILLBIRTHS IN 1 HAMMAL 1384 OR LATER ☐ ↓ NO BIRTHS OR STILLBIRTHS IN 1 HAMMAL 1384 OR LATER ☐		→ 501
402	CHECK Q.313, 317 AND 324: ENTER IN THE TABLE THE LINE NUMBER AND NAME OF THE LAST BIRTH OR STILLBIRTH THAT TOOK PLACE IN 1 HAMMAL 1384 OR LATER. IF THERE ARE MORE THAN ONE BIRTH OR STILLBIRTH ASK THE QUESTIONS ABOUT ONLY THE LAST BIRTH OR STILLBIRTH. NAME AND LINE NUMBER ______ ☐☐		
	Now I would like to ask you some questions about the health care you received in the last five years while pregnant with [NAME or after the birth of (NAME).		
403	Did you see anyone for antenatal care during this pregnancy? IF YES: Who did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON	HEALTH PERSONNEL DOCTOR . . . . A NURSE/MIDWIFE . . . . B OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . C COMM. HEALTH WORKER . . . . D OTHER ______ X (SPECIFY) NO ONE . . . . Y	(A–X) → 405
404	Why did you not see anyone? PROBE: Any other reason? CIRCLE ALL MENTIONED	NOT NECESSARY . . . . A NOT CUSTOMARY . . . . B LACK OF MONEY . . . . C TOO FAR . . . . D TRANSPORTATION PROBLEM . . . . E NO ONE TO ACCOMPANY . . . . F GOOD SERVICE NOT AVAILABLE . . . . G DID NOT GET PERMISSION . . . . H BETTER SERVICE AT HOME . . . . I DID NOT KNOW WHERE TO GO . . . . . J NO FEMALE PROVIDER AVAILABLE . . . . K INCONVENIENT SERVICE HOUR . . . . . L AFRAID OF BAD PEOPLE . . . . M SECURITY REASONS . . . . N LONG WAITING TIME . . . . O RELIGIOUS REASON . . . . P AFRAID OF HEALTH FACILITIES . . . . . Q WAS NOT LIFE THREATENING . . . . . R OTHER ______ X (SPECIFY)	→ 413
405	The very first time you went for antenatal care when you were pregnant with (NAME), did you go because of problems with the pregnancy or just for a checkup?	BECAUSE OF A PROBLEM . . . . . 1 JUST FOR A CHECKUP 2	(2) → 407
406	What problems did you have when you first went for antenatal care when you were pregnant with [NAME]? Anything else? CIRCLE ALL MENTIONED.	HEADACHE . . . . A BLURRY VISION . . . . B SWOLLEN FACE/HANDS/FEET C HIGH FEVER . . . . D SPOTTING/BLEEDING . . . . E FOUL-SMELLING DISCHARGE F LOWER ABDOMINAL PAIN . . . . . G SHAKING/FITS H FAINTED/UNCONSCIOUS I TOO EARLY CONTRACTIONS J BABY NOT MOVING/ NOT MOVING MUCH . . . . K VOMITING . . . . L WHOLE BODY PAIN . . . . M THIN/WEAK BLOOD . . . . N **CIRCLE BELOW ONLY IF WOMAN USES EXACT TERM** EDEMA . . . . O PRE-ECLAMSIA . . . . P CONVULSIONS . . . . Q ECLAMPSIA . . . . R TETANUS . . . . S ANEMIA . . . . T OTHER ______ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
407	Where did you receive antenatal care for this pregnancy? IF SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. ______________________ NAME OF PLACE PROBE: Any other place? RECORD ALL PLACES MENTIONED.	HOME RESPONDENT'S HOME ..... A OTHER HOME .... B PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT .. C CHC/POLYCLINIC .... D BASIC HEALTH CENTER .. E HEALTH POST/SUB-HEALTH POST F MOBILE CLINIC G OTHER PUBLIC ______ H' (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL .... I PVT. CLINIC .... J PVT DOCTOR'S OFFICE .... K OTHER PRIVATE ______ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS ...... M REFUGEE CAMP ...... N OTHER ______ X (SPECIFY)	
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS .... [ ][ ] DON'T KNOW 98	
409	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES .... [ ][ ] DON'T KNOW 98	
410	As part of your antenatal care during this pregnancy, were any of the following done at least once? a) Were you weighed? b) Was your blood pressure measured? c) Did you give a urine sample? d) Did you give a blood sample?	YES NO a) WEIGHT .... 1 2 b) BP .... 1 2 c) URINE .... 1 2 d) BLOOD 1 2	
411	During (any of) your antenatal care visit (s), were you told about the signs of pregnancy complications?	YES .... 1 NO .... 2 DON'T KNOW 8	2, 8 → 413
412	Were you told where to go if you had any of these complications?	YES .... 1 NO .... 2 DON'T KNOW 8	
413	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions in baby after birth?	YES .... 1 NO .... 2 DON'T KNOW 8	2, 8 → 416
414	During this pregnancy, how many times did you get this tetanus injection?	NUMBER OF TIMES .... [ ][ ] DON'T KNOW 98	
415	CHECK Q.414: OTHER [ ] ↓ TWO OR MORE TIMES [ ]		→ 420
416	At any time before this pregnancy, did you receive any tetanus injections, either to protect yourself or another baby?	YES .... 1 NO .... 2 DON'T KNOW 8	2, 8 → 420
417	Before this pregnancy, how many other times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES .... [ ][ ] DON'T KNOW 98	
418	In what month and year did you receive the last tetanus injection before this pregnancy?	MONTH .... [ ][ ] DK MONTH .... 98 YEAR .... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→ 420

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
419	How many years ago did you receive that tetanus injection?	YEARS AGO . . . . [ ][ ]	
420	During this pregnancy, were you given or did you buy any iron/folic acid tablets like these? SHOW TABLETS.	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 422
421	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . . . . [ ][ ][ ] DON'T KNOW 998	
422	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
423	Who assisted with the delivery of (NAME)? PROBE: Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . A NURSE/MIDWIFE . . . . B OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . C COMM. HEALTH WORKER . . . . D RELATIVE/FRIEND . . . . E OTHER ______________ X (SPECIFY) NO ONE . . . . Y	
424	Where did you give birth to (NAME)? WRITE THE NAME OF THE PLACE. IF THE SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. ______________ NAME OF PLACE	HOME RESPONDENT'S HOME . . . . 01 OTHER HOME . . . . 02 PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . 03 CHC/POLYCLINIC . . . . 04 BASIC HEALTH CENTER . . . . 05 OTHER PUBLIC ______________ 06 (SPECIFY)(SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . 07 PVT. CLINIC . . . . 08 PVT DOCTOR'S OFFICE . . . . 09 OTHER PRIVATE ______________ 10 (SPECIFY)(SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . . 11 REFUGEE CAMP . . . . 12 OTHER ______________ 96 (SPECIFY)	03–10 → 426
425	Why did you not deliver at a hospital or health center? PROBE: Any other reason? CIRCLE ALL MENTIONED.	NOT NECESSARY . . . . A NOT CUSTOMARY . . . . B LACK OF MONEY . . . . C TOO FAR . . . . D TRANSPORTATION PROBLEM E NO ONE TO ACCOMPANY F GOOD SERVICE NOT AVAILABLE G DIDN'T GET PERMISSION H BETTER SERVICE AT HOME I DID NOT KNOW WHERE TO GO J NO FEMALE PROVIDER AVAILABLE . . . . K INCONVENIENT SERVICE HOUR . . . . L AFRAID OF BAD PEOPLE . . . . . M SECURITY REASONS . . . . N LONG WAITING TIME . . . . O RELIGIOUS REASON . . . . P AFRAID OF HEALTH FACILITIES Q WAS NOT LIFE THREATENING . . R OTHER ______________ X (SPECIFY)	→ 427

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
426	Were any of the following procedures performed at the time of delivery? a. Forceps used to get the baby out. b. Vacuum extractor used to get the baby out. c. Episiotomy, that is, a cut in the vagina. d. Cesarian section, that is, a cut in the belly. e. Received blood transfusions. f. Received intravenous fluids (IV).	YES NO DK a. FORCEPS 1 2 8 b. VACUUM EXTRAC. 1 2 8 c. EPISIOTOMY 1 2 8 d. CESARIAN 1 2 8 e. BLOOD TRANSF 1 2 8 f. INTRAVENOUS 1 2 8	
427	At any time just before, during or after the delivery of (NAME) did you suffer from any problems? IF YES: What problems did you have? Anything else? CIRCLE ALL MENTIONED.	HEADACHE . . . . A BLURRY VISION . . . . B SWOLLEN FACE/HANDS/FEET C HIGH FEVER . . . . D EXCESSIVE BLEEDING . . . . E FOUL-SMELLING DISCHARGE . . . . F LOWER ABDOMINAL PAIN . . . . G SHAKING/FITS . . . . H FAINTED/UNCONSCIOUS . . . . I TOO LONG/PROLONGED LABOR . . . . J WATER BROKE TOO EARLY . . . . K BABY WOULDN'T COME OUT . . . . L BABY NOT MOVING/ NOT MOVING MUCH . . . . M BABY'S HANDS/FEET CAME OUT FIRST . . . . N WHOLE BODY PAIN . . . . O TEARING/TORN PELVIC AREA . . . . P LEAKING URINE/STOOL . . . . Q **CIRCLE BELOW ONLY IF WOMAN USES EXACT TERM** EDEMA . . . . R PRE-ECLAMSIA . . . . S CONVULSIONS . . . . T ECLAMPSIA . . . . U TETANUS . . . . V DID NOT HAVE ANY PROBLEMS Y OTHER ______ X (SPECIFY)	Y → 437
428	Did you see anyone about this (these) problems?	YES . . . . 1 NO 2	1 → 430
429	Why did you not see anyone for the problems you had? PROBE: Any other reason? CIRCLE ALL MENTIONED.	NOT NECESSARY . . . . A NOT CUSTOMARY . . . . B LACK OF MONEY . . . . C TOO FAR . . . . D TRANSPORTATION PROBLEM . . . . E NO ONE TO ACCOMPANY . . . . F GOOD SERVICE NOT . . . . AVAILABLE . . . . G DID NOT GET PERMISSION . . . . H BETTER SERVICE AT HOME I DID NOT KNOW WHERE TO GO J NO FEMALE PROVIDER AVAILABLE . . . . K INCONVENIENT SERVICE HOUR . . . . L AFRAID OF BAD PEOPLE . . . . . M SECURITY REASONS . . . . N LONG WAITING TIME . . . . O RELIGIOUS REASON . . . . P AFRAID OF HEALTH FACILITIES . . . . . Q WAS NOT LIFE THREATENING . . . . . R OTHER ______ X (SPECIFY)	→ 437

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
430	Who did you see about the problems you had PROBE: Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . . . . B OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . C COMM. HEALTH WORKER . . . . . D TRADITIONAL PRACTITIONER/ UNANI . . . . . E RELATIVE/FRIEND . . . . . F OTHER ______ X (SPECIFY) NO ONE . . . . . Y	
431	Where were you treated for this (these) problems? WRITE THE NAME OF THE PLACE(S). IF THE SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). ______ NAME OF PLACE	HOME RESPONDENT'S HOME . . . . . A OTHER HOME . . . . . B PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . C CHC/POLYCLINIC . . . . . D BASIC HEALTH CENTER . . E HEALTH POST/SUB-HEALTH POST F MOBILE CLINIC G OTHER PUBLIC ______ H (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . . I PVT. CLINIC . . . . . J PVT DOCTOR'S OFFICE K OTHER PRIVATE ______ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS M REFUGEE CAMP N OTHER ______ X (SPECIFY)	
432	Did your condition improve after you were treated?	NO CHANGE . . . . . 1 IMPROVED . . . . . 2 WORSENED . . . . . 3 DON'T KNOW 8	
433	Were you referred or told to go to another place for treatment or advice?	YES . . . . . 1 NO 2	 → 437
434	Where were you referred to or told to go for treatment for this (these) problems? WRITE THE NAME OF THE PLACE(S). IF THE SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). ______ NAME OF PLACE	PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . C CHC/POLYCLINIC . . . . . D BASIC HEALTH CENTER . . . . . E HEALTH POST/SUB-HEALTH POST F MOBILE CLINIC . . . . . G OTHER PUBLIC ______ H (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . . I PVT. CLINIC . . . . . J PVT DOCTOR'S OFFICE . . . . . K OTHER PRIVATE ______ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS M REFUGEE CAMP N OTHER ______ X (SPECIFY)	
435	Did you go to the place you were referred to or told to go for treatment?	YES . . . . . 1 NO 2	→ 437

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
436	Why did you not go to the referred place or any other place for treatment? PROBE: Any other reason? CIRCLE ALL MENTIONED.	NOT NECESSARY . . . . A NOT CUSTOMARY . . . . B LACK OF MONEY . . . . C TOO FAR . . . . D TRANSPORTATION PROBLEM . . . . E NO ONE TO ACCOMPANY . . . . F GOOD SERVICE NOT AVAILABLE . . . . G COULDN'T GET PERMISSION . . . . H BETTER SERVICE AT HOME . . . . I DID NOT KNOW WHERE TO GO . . . . J NO FEMALE PROVIDER . . . . AVAILABLE . . . . K INCONVENIENT SERVICE HOUR . . . . L AFRAID OF BAD PEOPLE . . . . M SECURITY REASONS . . . . N LONG WAITING TIME . . . . O RELIGIOUS REASON . . . . P AFRAID OF HEALTH FACILITIES . . . . . Q WAS NOT LIFE THREATENING . . . . . R OTHER X ______________________ (SPECIFY)	
437	CHECK Q.424: ANY CODES '03' TO '12' CIRCLED ☐ ↓	OTHER CODES CIRCLED ☐ →	439
438	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 98	
439	After (NAME) was born, did anyone check on your health?	YES . . . . 1 NO 2	 → 443
440	How long after (NAME) was delivered did the first check on your health take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 998	
441	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . 1 NURSE/MIDWIFE . . . . 2 OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . . . 3 COMM. HEALTH WORKER . . . . 4 RELATIVE/FRIEND . . . . 5 OTHER ______________________ 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
442	Where did this first check on your health take place? WRITE THE NAME OF THE PLACE(S). IF THE SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). ______________________ NAME OF PLACE	HOME RESPONDENT'S HOME . . . . 01 OTHER HOME . . . . 02 PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT 03 CHC/POLYCLINIC . . . . 04 BASIC HEALTH CENTER . . . . 05 HEALTH POST/SUB-HEALTH POST 06 MOBILE CLINIC 07 OTHER PUBLIC ______________ 08 (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . 09 PVT. CLINIC . . . . 10 PVT DOCTOR'S OFFICE 11 OTHER PRIVATE ______________ 12 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS 13 REFUGEE CAMP 14 OTHER ______________ 96 (SPECIFY)	
443	In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF CAPSULES.	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
444	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?		

		YES	NO
a) Lack of money?	a) LACK OF MONEY	1	2
b) Too far?	b) TOO FAR	1	2
c) Transportation problem?	c) TRANSPORTATION PROBLEM	1	2
d) No one to accompany?	d) NO ONE TO ACCOMPANY	1	2
e) Good provider not available?	e) GOOD PROVIDER NOT AVAILABLE	1	2
f) Drugs not available?	f) DRUGS NOT AVAILABLE	1	2
g) Couldn't get permission?	g) COULDN'T GET PERMISSION	1	2
h) Better service at home?	h) BETTER SERVICE AT HOME	1	2
i) Do not know where to go?	i) DID NOT KNOW WHERE TO GO	1	2
j) No female provider available?	j) NO FEMALE PROVIDER AVAILABLE	1	2
k) Inconvenient service hour?	k) INCONVENIENT SERVICE HOUR	1	2
l) Afraid of bad people?	l) AFRAID OF BAD PEOPLE	1	2
m) Security reasons?	m) SECURITY REASONS	1	2
n) Long waiting time?	n) LONG WAITING TIME	1	2
o) Religious reasons?	o) RELIGIOUS REASON	1	2
p) Afraid of health facilities?	p) AFRAID OF HEALTH FACILITIES	1	2

SECTION 5. FAMILY PLANNING

501	CHECK 201: CURRENTLY MARRIED ☐ ↓	NOT CURRENTLY MARRIED ☐	→ 601
502	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?		
01	**Female sterilization** PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	**Male sterilization** PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	**IUD** PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	**INJECTABLES** PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	**Implants (Implanon/Jadelle/ Norplants)** PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
06	**Pill** PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	**Male condom** PROBE Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	**Lactational Amenorrhea Method (LAM)**	YES . . . . . 1 NO 2	
09	**Rhythm Method** PROBE: Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	
10	**Withdrawal** PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
11	**Emergency Contraception** PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy	YES . . . . . 1 NO 2	
12	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 __________ (SPECIFY) __________ (SPECIFY) NO 2	
503	Are you pregnant now?	YES 1 NO 2 UNSURE 8	1 → 601
504	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES 1 NO 2	2 → 601
505	Which method are you using? CIRCLE ALL MENTIONED.	FEMALE STERILIZATION A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F MALE CONDOM . . . . . G LACTATIONAL AMEN. METHOD H RHYTHM METHOD . . . . . I WITHDRAWAL . . . . . J OTHER MODERN METHOD X OTHER TRADITIONAL METH . . . . . Y	

SECTION 6. MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER .... [ ][ ]	
602	CHECK601: TWO OR MORE BIRTHS [ ]	ONLY ONE BIRTH (RESPONDENT ONLY) [ ]	618
603	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS .... [ ][ ]	

		(1)	(2)	(3)	(4)	(5)	(6)
604	What was the name given to your oldest (next oldest) brother or sister?	______	______	______	______	______	______
605	Is (NAME) male or female?	MALE .... 1 FEMALE .. 2	MALE .... 1 FEMALE .. 2	MALE .... 1 FEMALE .. 2	MALE .... 1 FEMALE .. 2	MALE .... 1 FEMALE .. 2	MALE .... 1 FEMALE .. 2
606	Is (NAME) still alive?	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8
607	How old is (NAME)?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]
608	Where does (NAME) usually live?	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8
609	When was the last time you had direct contact with (NAME) in person, by phone, mail or other means of communication?	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (2)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (3)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (4)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (5)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (6)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (7)
610	How many years ago did (NAME) die?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]
611	How old was (NAME) when he/she died?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]
612	Where did (NAME) usually live?	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8	URBAN .... 1 RURAL .... 2 DON'T KNOW 8
613	CHECK Q.605 AND Q.611	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
614	Was (NAME) pregnant when she died?	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2
615	Did (NAME) die during childbirth?	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2
616	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2
617	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]

IF NO MORE BROTHERS OR SISTERS, GO TO 618.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES					SKIP
604	What was the name given to your oldest (next oldest) brother or sister?	(7) __________	(8) __________	(9) __________	(10) __________	(11) __________	(12) __________
605	Is (NAME) male or female?	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2	MALE .... 1 FEMALE 2
606	Is (NAME) still alive?	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8	YES .... 1 NO .... 2 GO TO 610 DK 8
607	How old is (NAME)?						
608	Where does (NAME) usually live?	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8
609	When was the last time you had direct contact with (NAME) in person, by phone, mail or other means of communication?	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (8)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (9)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (10)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (11)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (12)	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 GO TO (13)
610	How many years ago did (NAME) die?						
611	How old was (NAME) when he/she died?						
612	Where did (NAME) usually live?	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8	URBAN .... 1 RURAL .... 2 DON'T KNOW .. 8
613	CHECK Q.605 AND Q.611	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (8)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
614	Was (NAME) pregnant when she died?	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2
615	Did (NAME) die during childbirth?	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2	YES .... 1 GO TO 617 NO 2
616	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2
617	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?						

TICK HERE IF ADDITIONAL QUESTIONNAIRES USED ☐

IF NO MORE BROTHERS OR SISTERS, GO TO 518.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES
618	RECORD THE TIME. MORNING=1 EVEVING=2	MORNING/EVENING HOUR .... MINUTES ....

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: ______________________ DATE: ______________________

EDITOR'S OBSERVATIONS

NAME OF EDITOR: ______________________ DATE: ______________________

April 14 2010

AFGHANISTAN MORTALITY SURVEY
VERBAL AUTOPSY [FORM 1]
DEATH OF AN INFANT AGED 0-28 DAYS

THE MINISTRY OF PUBLIC HEALTH

IDENTIFICATION

VILLAGE / NEIGHBORHOOD [MUQATAA / MAHALAH] ____________

NAME OF HOUSEHOLD HEAD ____________

CLUSTER NUMBER [SAHA SHOMOR] . . . .

STRUCTURE NUMBER . . . .

HOUSEHOLD NUMBER . . . .

NAME, LINE NUMBER OF RESPONDENT FROM Q.101 AND Q.102 IN HQ ____________

NAME, COLUMN NUMBER OF DECEASED FROM Q.303 AND Q.304 IN HQ ____________

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	______	______	______	DAY MONTH YEAR
INTERVIEWER'S NAME	______	______	______	INT. NUMBER
RESULT*	______	______	______	RESULT
NEXT VISIT: DATE	______	______		TOTAL NUMBER OF VISITS
TIME	______	______		

*RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
7 INCAPACITATED
6 OTHER ____________ (SPECIFY)

LANGUAGE OF INTERVIEW

LANGUAGE OF QUESTIONNAIRE: 3 LANGUAGE OF INTERVIEW: LANGUAGE OF RESPONDENT

LANGUAGE CODES: PASHTU = 1, DARI = 2, ENGLISH = 3, OTHER = 4 ____________ (SPECIFY)

TRANSLATOR USED: (YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME ______	NAME ______		

Introduction and Consent

Hello. My name is______________________and I am working with the Ministry of Public Health.
We are conducting a survey about health all over Afghanistan.
Your household was selected for the survey. The questions usually take about 30 to 45 minutes.

We are collecting information on the causes of death in the community. This information will help the government to plan health services. We would very much appreciate your participation in this survey. We learned during our earlier visit that (NAME) had died recently. As part of the survey we want to ask you about the circumstances leading to the death of the deceased. Whatever information you provide wil be kept strictly confidential. No information identifying you or the deceased will ever be released to anyone outside of this survey.

Participation in this survey is voluntary and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your answers will help the government improve health services for Afghans.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: ______________________________ Date: ____________________

RESPONDENT AGREES TO BE INTERVIEWED 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED 2 → END

DEATH OF A CHILD AGED 0-28 DAYS

SECTION 2. BASIC INFORMATION ABOUT RESPONDENT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENING .... ☐ HOUR .... ☐☐ MINUTES .... ☐☐	
202	What is your relationship to the baby?	FATHER .... 1 MOTHER .... 2 SIBLING .... 3 OTHER RELATIVE ______________ 6 (SPECIFY) NO RELATION 8	
203	Did you live with the baby in the period leading to her/his death?	YES .... 1 NO 2	

SECTION 3. INFORMATION ON THE DECEASED AND DATE/PLACE OF DEATH

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	What was the name of the baby? IF NO NAME HAS BEEN GIVEN TO THE BABY WRITE 'BABY'.	______________ (NAME)	
302	Was (NAME) male or female?	MALE .... 1 FEMALE 2	
303	When was (NAME) born? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY .... ☐☐ MONTH .... ☐☐ YEAR .... ☐☐☐☐	
304	How old was (NAME) when s/he died? IF LESS THAN ONE DAY RECORD '00'.	DAYS .... ☐☐	
305	When did s/he die? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY .... ☐☐ MONTH .... ☐☐ YEAR .... ☐☐☐☐	
305A	CHECK 305: DIED 1 HAMMAL 1386 OR AFTER ☐ ↓	DIED EARLIER THAN 1 HAMMAL 1386 ☐ →	END
305B	CHECK 304: AGE AT DEATH 0-28 DAYS ☐ ↓	AGE AT DEATH 29 DAYS TO 11 YEARS ☐ → AGE AT DEATH 12 YEARS AND ABOVE ☐ →	USE VA FORM 2 USE VA FORM 3
306	Where did s/he die?	HOSPITAL .... 1 OTHER HEALTH FACILITY .... **2** HOME .... 3 OTHER ______________ 6 (SPECIFY) DON'T KNOW 8	

DEATH OF A CHILD AGED 0-28 DAYS

SECTION 4. RESPONDENT'S ACCOUNT OF ILLNESS/EVENTS LEADING TO DEATH

401	Could you tell me about the illness/events that led to her/his death?
402	CAUSE OF DEATH 1 ACCORDING TO RESPONDENT
403	CAUSE OF DEATH 2 ACCORDING TO RESPONDENT

DEATH OF A CHILD AGED 0-28 DAYS

SECTION 5. PREGNANCY HISTORY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	I would like to ask you some questions concerning the mother and symptoms that (NAME) had/showed at birth and shortly after. Some of these questions may not appear to be directly related to the baby's death. Kindly be patient and answer all the questions. They will help us to get a clear picture of all possible symptoms that (NAME) had.		
502	How many births, including stillbirths, did the mother have before this baby?	NUMBER OF BIRTHS/ STILLBIRTHS . . . . . [ ][ ] DON'T KNOW 98	
503	How many months was the pregnancy when the baby was born?	MONTHS . . . . . [ ][ ] DON'T KNOW 98	
504	Did the pregnancy end earlier than expected?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 506 → 506
505	How many weeks before the expected date of delivery did the pregnancy end?	WEEKS . . . . . [ ][ ] DON'T KNOW 98	
506	During the pregnancy did the mother suffer from any of the following known illnesses: 1 High blood pressure? 2 Heart disease? 3 Diabetes? 4 Epilepsy/convulsion? 5 Any other medically diagnosed illness?	YES NO DK HIGH BLOOD PRESSURE . . . . . 1 2 8 HEART DISEASE . . . . . 1 2 8 DIABETES . . . . . 1 2 8 EPILEPSY/CONVULSION . . . . . 1 2 8 OTHER . . . . . 1 2 8 ______________ (SPECIFY)	
507	During the last 3 months of pregnancy did the mother suffer from any of the following illnesses: 01 Vaginal bleeding? 02 Smelly vaginal discharge? 03 Puffy face? 04 Headache? 05 Blurred vision? 06 Convulsion? 07 Febrile illness? 08 Severe abdominal pain that was not labor pain? 09 Pallor and shortness of breath (both present)? 10 Did she suffer from any other illness?	YES NO DK VAGINAL BLEEDING . . . . . 1 2 8 SMELLY VAGINAL DISCHARGE . . . . . 1 2 8 PUFFY FACE . . . . . 1 2 8 HEADACHE . . . . . 1 2 8 BLURRED VISION . . . . . 1 2 8 CONVULSION . . . . . 1 2 8 FEBRILE ILLNESS . . . . . 1 2 8 SEVERE ABDOMINAL PAIN (NOT LABOR PAIN) . . . . . 1 2 8 PALLOR/SHORTNESS OF BREATH (BOTH) . . . . . 1 2 8 OTHER ILLNESS . . . . . 1 2 8 ______________ (SPECIFY)	
508	Was the child a single or multiple birth?	SINGLETON . . . . . 1 TWIN . . . . . 2 TRIPLET OR MORE . . . . . 3 DON'T KNOW 8	→ 601 → 601
509	What was the birth order of the child that died?	FIRST . . . . . 1 SECOND . . . . . 2 THIRD OR HIGHER . . . . . 3 DON'T KNOW 8	

SECTION 6. DELIVERY HISTORY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Where was the child born? PROBE TO IDENTIFY THE TYPE OF HEALTH FACILITY AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HEALTH FACILITY IS PUBLIC OR PRIVATE , WRITE THE NAME OF THE PLACE ____________ (NAME OF PLACE)	HOME RESPONDENT'S HOME . . . . . 01 OTHER HOME . . . . . 02 PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . . . . 03 CHC/POLYCLINIC . . . . . 04 BASIC HEALTH CENTER . . . . . 05 OTHER PUBLIC ________ 06 (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . . 07 PRIVATE CLINIC . . . . . 08 PRIVATE DOCTOR'S OFFICE . . . . . 09 OTHER PRIVATE ________ 10 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . . . 11 REFUGEE CAMP . . . . . 12 OTHER ________ 96 (SPECIFY)	
602	Who assisted with the delivery? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT DURING THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . . . . B OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . . . . C COMMUNITY HEALTH WORKER . . . . . D RELATIVE/FRIEND . . . . . E OTHER ________ X (SPECIFY) NO ONE . . . . . Y	
603	When did the water break?	BEFORE LABOR STARTED . . . . . 1 DURING LABOR . . . . . 2 DON'T KNOW 8	
604	How many hours after the water broke was the baby born?	LESS THAN 24 HOURS . . . . . 1 24 HOURS OR MORE . . . . . 2 DON'T KNOW 8	
605	Was the water foul smelling?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
606	Did the baby stop moving in the womb?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 608 → 608
607	When did the baby stop moving in the womb?	BEFORE LABOR STARTED . . . . . 1 DURING LABOR . . . . . 2 DON'T KNOW 8	
608	Did a birth attendant listen for fetal heart sounds during labor?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 610 → 610
609	Were fetal heart sounds present?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
610	Was there excess bleeding on the day labor started?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
611	Did the mother have a fever on the day labor started?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	How long did the labor pains last?	LESS THAN 12 HOURS . . . . 1 12-23 HOURS . . . . 2 24 HOURS OR MORE . . . . 3 DON'T KNOW 8	
613	Was it a normal vaginal delivery?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 615 → 615
614	What type of delivery was it?	FORCEPS/VACUUM . . . . 1 CAESAREAN SECTION . . . . 2 OTHER ______ 6 (SPECIFY) DON'T KNOW 8	
615	Which part of the baby came first?	HEAD . . . . 1 BOTTOM . . . . 2 FEET . . . . 3 ARM/HAND . . . . 4 OTHER ______ 6 (SPECIFY) DON'T KNOW 8	
616	Did the umbilical cord come out before the baby was born?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	

SECTION 7. CONDITION OF THE BABY SOON AFTER BIRTH

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	At birth what was the size of the baby?	SMALLER THAN NORMAL . . . . 1 NORMAL . . . . 2 LARGER THAN NORMAL . . . . 3 DON'T KNOW 8	
702	Was the baby premature?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 704 → 704
703	How many months or weeks long was the pregnancy? INDICATE DURATION OF PREGNANCY	MONTHS . . . . 1 [ ][ ] WEEKS . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
704	What was the birth weight of the baby?	KILOGRAMS . . . . [ ] . [ ] DON'T KNOW 9 8	
705	Was anything applied to the umbilical cord stump after birth?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 707 → 707
706	What was it?	______ ______ (SPECIFY)	
707	Were there any signs of injury or broken bones?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 709 → 709
708	Where were the marks or signs of injury?	______ ______ (SPECIFY)	
709	Was there any sign of paralysis?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
710	Did the baby have any malformation?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 712 → 712

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	What kind of malformation did the baby have?	SWELLING/DEFECT ON THE BACK . . . . A VERY LARGE HEAD . . . . B VERY SMALL HEAD . . . . C DEFECT OF LIP AND/OR PALATE . . . . D OTHER MALFORMATION ______________ X (SPECIFY) DON'T KNOW . . . . Y	
712	What was the color of the baby at birth?	NORMAL . . . . 1 PALE . . . . 2 BLUE . . . . 3 DON'T KNOW 8	
713	Did the baby breathe after birth, even a little?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
714	Was the baby given assistance to breathe?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
715	Did the baby ever cry after birth, even a little?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
716	Did the baby ever move, even a little?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
717	CHECK 713, 715, AND 716 FOR CODES 'NO': ALL THREE CODES 'NO': THE BABY DIDN'T BREATH, THE BABY DIDN'T CRY, THE BABY DIDN'T MOVE ☐	OTHER: ☐	→ 801
718	If the baby did not cry, breathe or move, was it born dead?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 801 → 801
719	Was the baby macerated, that is, showed signs of decay?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 1001 → 1001 → 1001

SECTION 8. HISTORY OF INJURIES/ACCIDENTS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Did the baby suffer from any injury or accident that led to her/his death?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 804 → 804
802	What kind of injury or accident did the baby suffer?	ROAD TRAFFIC ACCIDENT . . . . 1 FALL . . . . 2 DROWNING . . . . 3 POISONING . . . . 4 BURNS . . . . 5 VIOLENCE/ASSAULT . . . . 7 OTHER ______________ 6 (SPECIFY) DON'T KNOW 8	
803	Was the injury or accident intentionally inflicted by someone else?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
804	Did the baby suffer from any animal/insect bite that led to her/his death?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 901 → 901
805	What type of animal/insect?	DOG . . . . 1 SNAKE . . . . 2 INSECT . . . . 3 OTHER ______________ 6 (SPECIFY) DON'T KNOW 8	

SECTION 9. NEONATAL ILLNESS HISTORY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Was the baby ever able to suckle or bottle-feed?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 906 → 906
902	How soon after birth did the baby suckle or bottle-feed?	HOURS . . . . 1 [ ][ ] DAYS . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
903	Did the baby stop suckling or bottle-feeding?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 905 → 905
904	How many days after birth did the baby stop suckling or bottle-feeding?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
905	Was the breastfeeding exclusive?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
906	Did the baby have convulsions?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 908 → 908
907	How soon after birth did the convulsions start?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
908	Did the baby become stiff and arched backwards?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
909	Did the child have bulging of the fontanelle?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 911 → 911
910	How many days after birth did the baby have the bulging?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
911	Did the baby become unresponsive or unconscious?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 913 → 913
912	How many days after birth did the baby become unresponsive or unconscious?'	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
913	Did the baby have a fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 915 → 915
914	How many days after birth did the baby have a fever?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
915	Did the baby become cold to the touch?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 917 → 917
916	How many days after birth did the baby become cold to the touch?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
917	Did the baby have a cough?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 919 → 919
918	How many days after birth did the baby start to cough?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
919	Did the baby have fast breathing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 921 → 921
920	How many days after birth did the baby start breathing fast?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
921	Did the baby have difficulty breathing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 926 → 926
922	How many days after birth did the baby start having difficulty in breathing?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
923	Did the baby have chest indrawing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
924	Did the baby have grunting? DEMONSTRATE	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
925	Did the baby have flaring of the nostrils?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
926	Did the baby have diarrhea?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 930 → 930
927	How many days after birth did the baby have diarrhea?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
928	When the diarrhea was most severe, how many times did the baby pass stools in a day?	NUMBER OF TIMES . . . [ ][ ] DON'T KNOW . . . 9 8	
929	Was there blood in the stools?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
930	Did the baby have vomiting?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 933 → 933
931	How many days after birth did vomiting start?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
932	When the vomiting was most severe, how many times did the baby vomit in a day?	NUMBER OF TIMES . . . [ ][ ] DON'T KNOW . . . 9 8	
933	Did the baby have abdominal distension?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 935 → 935
934	How many days after birth did the baby have abdominal distension?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
935	Did the baby have redness or discharge from the umbilical cord stump?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
936	Did the baby have a pustular skin rash?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
937	Did the baby have yellow palms or soles?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 1001 → 1001
938	How many days after birth did the yellow palms or soles begin?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
939	For how many days did the baby have yellow palms or soles?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	

SECTION 10. MOTHER'S HEALTH AND CONTEXTUAL FACTORS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	What was the age of the mother at the time the baby died?	YEARS . . . . [ ][ ] DON'T KNOW 9 8	
1002	Did the mother receive antenatal care?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
1003	Did the mother receive tetanus toxoid (TT) vaccine?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 1005 → 1005
1004	How many doses?	NUMBER OF DOSES . . . . [ ][ ] DON'T KNOW 9 8	
1005	How is the mother's health now?	HEALTHY . . . . 1 ILL . . . . 2 NOT ALIVE . . . . 3 DON'T KNOW 8	

DEATH OF A CHILD AGED 0-28 DAYS

SECTION 11 TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Did the baby receive any treatment for the illness that led to death?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 1201 → 1201
1102	Can you please list the treatments the baby was given for the illness that led to death? COPY FROM PRESCRIPTION/DISCHARGE NOTES IF AVAILABLE	a) ________ b) ________ c) ________	
1103	Where did (NAME) receive treatment for the illness that led to his/her death? PROBE: Any where else? CIRCLE ALL PLACES MENTIONED. PROBE TO IDENTIFY THE TYPE OF HEALTH FACILITY AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HEALTH FACILITY IS PUBLIC OR PRIVATE , WRITE THE NAME OF THE PLACE ________ (NAME OF PLACE)	HOME RESPONDENT'S HOME . . . . . A OTHER HOME . . . . . B PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . . . . C CHC/POLYCLINIC . . . . . D BASIC HEALTH CENTER . . . . . E HEALTH POST/SUB-HEALTH POST . . . . . F MOBILE CLINIC . . . . . G OTHER PUBLIC ________ H (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . . I PRIVATE CLINIC . . . . . J PRIVATE DOCTOR'S OFFICE . . . . . K OTHER PRIVATE ________ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . . . M REFUGEE CAMP . . . . . N OTHER ________ X (SPECIFY)	
1103A	CHECK Q.1103: CODE C TO N CIRCLED ☐ ↓	OTHER CODE CIRCLED ☐	→ 1201
1104	In the month before death, how many times in total did s/he receive treatment from this/these facilities?	NUMBER OF TIMES . . . . . ☐☐ DON'T KNOW 9 8	
1105	Did a health care worker tell you the cause of death?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 1201 → 1201
1106	What did the health care worker say?	________ ________ ________	

SECTION 12. DATA ABSTRACTED FROM DEATH CERTIFICATE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1201	Do you have a death certifcate for the baby?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 1301 → 1301
1202	Can I see the death certificate? COPY DAY, MONTH AND YEAR OF DEATH FROM THE DEATH CERTIFICATE.	DAY MONTH YEAR	
1203	COPY DAY, MONTH AND YEAR OF ISSUE OF DEATH CERTIFICATE.	DAY MONTH YEAR	
1204	RECORD THE CAUSE OF DEATH FROM THE FIRST (TOP) LINE OF THE DEATH CERTIFICATE:		
1205	RECORD THE CAUSE OF DEATH FROM THE SECOND LINE OF THE DEATH CERTIFICATE (IF ANY):		
1206	RECORD THE CAUSE OF DEATH FROM THE THIRD LINE OF THE DEATH CERTIFICATE (IF ANY):		
1207	RECORD THE CAUSE OF DEATH FROM THE FOURTH LINE OF THE DEATH CERTIFICATE (IF ANY):		

DEATH OF A CHILD AGED 0-28 DAYS

SECTION 13. DATA ABSTRACTED FROM OTHER HEALTH RECORDS

1301	OTHER HEALTH RECORDS AVAILABLE	YES . . . . 1 NO 2	 →1311
1302	FOR EACH TYPE OF HEALTH RECORD SUMMARIZE DETAILS FOR LAST 2 VISITS (IF MORE THAN 2) AND RECORD DATE OF ISSUE. (RECORD INFORMATION ABOUT MOTHER AND STILLBORN DECEASED CHILD)		
1303	BURIAL PERMIT (CAUSE OF DEATH) ____________		
1304	POST MORTEM RESULTS (CAUSE OF DEATH) ____________		
1305	VACCINATION/MCH/ANC CARD (RELEVANT INFORMATION) ____________		
1306	HOSPITAL PRESCRIPTION (RELEVANT INFORMATION) ____________		
1307	TREATMENT CARDS (RELEVANT INFORMATION) ____________		
1308	HOSPITAL DISCHARGE (RELEVANT INFORMATION) ____________		
1309	LABORATORY RESULTS (RELEVANT INFORMATION) ____________		
1310	OTHER HOSPITAL DOCUMENTS SPECIFY: ____________		
1311	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENINC . . . . HOURS . . . . MINUTES	

DEATH OF A CHILD AGED 0-28 DAYS

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

____

____

____

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____

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COMMENTS ON SPECIFIC QUESTIONS:

____

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ANY OTHER COMMENTS:

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SUPERVISOR'S OBSERVATIONS

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NAME OF THE SUPERVISOR: ______________________ DATE: ______________________

April 14 2010

AFGHANISTAN MORTALITY SURVEY
VERBAL AUTOPSY [FORM 2]
DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

THE MINISTRY OF PUBLIC HEALTH

IDENTIFICATION	
VILLAGE / NEIGHBORHOOD [MUQATAA / MAHALAH] ____________	
NAME OF HOUSEHOLD HEAD ____________	
CLUSTER NUMBER [SAHA SHOMOR]	
STRUCTURE NUMBER	
HOUSEHOLD NUMBER	
NAME, LINE NUMBER OF RESPONDENT FROM Q.101 AND Q.102 IN HQ ____________	
NAME, COLUMN NUMBER OF DECEASED FROM Q.303 AND Q.304 IN HQ ____________	

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE	______	______	______	DAY
				MONTH
				YEAR
INTERVIEWER'S NAME	______	______	______	INT. NUMBER
RESULT*	______	______	______	RESULT
NEXT VISIT: DATE	______	______		TOTAL NUMBER OF VISITS
TIME	______	______		

*RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
7 INCAPACITATED
6 OTHER ____________
(SPECIFY)

LANGUAGE OF INTERVIEW

LANGUAGE OF QUESTIONNAIRE: ☐ LANGUAGE OF INTERVIEW: ☐ LANGUAGE OF RESPONDENT ☐

LANGUAGE CODES: PASHTU = 1, DARI = 2, ENGLISH = 3, OTHER = 4

TRANSLATOR USED: (YES = 1, NO = 2) ☐

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME ______	NAME ______		

Introduction and Consent

Hello. My name is______________________and I am working with the Ministry of Public Health.
We are conducting a survey about health all over Afghanistan.
Your household was selected for the survey. The questions usually take about 30 to 45 minutes.

We are collecting information on the causes of death in the community. This information will help the government to plan health services. We would very much appreciate your participation in this survey. We learned during our earlier visit that (NAME) had died recently. As part of the survey we want to ask you about the circumstances leading to the death of the deceased. Whatever information you provide wil be kept strictly confidential. No information identifying you or the deceased will ever be released to anyone outside of this survey.

Participation in this survey is voluntary and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your answers will help the government improve health services for Afghanis.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: ______________________________ Date: ____________________

RESPONDENT AGREES TO BE INTERVIEWED 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED 2 → END

DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

SECTION 2. BASIC INFORMATION ABOUT RESPONDENT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENING . . . . [ ] HOUR . . . . [ ][ ] MINUTES . . . . [ ][ ]	
202	What is your relationship to the deceased?	FATHER . . . . 1 MOTHER . . . . 2 SPOUSE 3 SIBLING . . . . 4 OTHER RELATIVE ______________________ 6 (SPECIFY) NO RELATION 8	
203	Did you live with the deceased in the period leading to her/his death?	YES . . . . 1 NO 2	

SECTION 3. INFORMATION ON THE DECEASED AND DATE/PLACE OF DEATH

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	What was the name of the deceased?	______________________ (NAME)	
302	Was the deceased male or female?	MALE . . . . 1 FEMALE 2	
303	When was the deceased born? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY . . . . [ ][ ] MONTH . . . . [ ][ ] YEAR . . . . [ ][ ][ ][ ]	
304	How old was the deceased when s/he died? IF AGE LESS THAN 1 YEAR RECORD MONTHS	AGE IN YEARS . . . . 1 [ ][ ] AGE IN MONTHS . . . . 2 [ ][ ]	
305	When did s/he die? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY . . . . [ ][ ] MONTH . . . . [ ][ ] YEAR . . . . [ ][ ][ ][ ]	
305A	CHECK 305: DIED 1 HAMMAL 1386 OR AFTER [ ]	DIED EARLIER THAN 1 HAMMAL 1386 [ ]	END
305B	CHECK 304: AGE AT DEATH 29 DAYS TO 11 YEARS [ ]	AGE AT DEATH 28 DAYS OR LESS [ ] AGE AT DEATH 12 YEARS AND ABOVE [ ]	USE VA FORM 1 USE VA FORM 3
306	What was her/his occupation, that is, what kind of work did s/he mainly do?	______________________ [ ][ ] ______________________ ______________________	
307	What is the highest level of school s/he attended: primary, secondary or madrassa?	NONE . . . . 1 PRIMARY . . . . 2 SECONDARY . . . . 3 MADRASSA . . . . 5 DON'T KNOW 8	
308	What was her/his marital status?	NEVER MARRIED . . . . 1 MARRIED . . . . 2 WIDOWED . . . . 3 DIVORCED . . . . 4 SEPARATED . . . . 5 DON'T KNOW 8	
309	Where did s/he die?	HOSPITAL . . . . 1 OTHER HEALTH FACILITY . . . . 2 HOME . . . . 3 OTHER ______________________ 6 (SPECIFY) DON'T KNOW 8	

DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

SECTION 4. RESPONDENT'S ACCOUNT OF ILLNESS/EVENTS LEADING TO DEATH

401	Could you tell me about the illness/events that led to her his/death?
402	CAUSE OF DEATH 1 ACCORDING TO RESPONDENT
403	CAUSE OF DEATH 2 ACCORDING TO RESPONDENT

DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

SECTION 5. HISTORY OF PREVIOUSLY KNOWN MEDICAL CONDITIONS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	I would like to ask you some questions concerning previously known medical conditions the deceased had; injuries and accidents that the deceased suffered; and signs and symptoms that the deceased had/showed when s/he was ill. Some of these questions may not appear to be directly related to his/her death. Please bear with me and answer all the questions. They will help us to get a clear picture of all possible symptoms that the deceased had. Please tell me if the deceased suffered from any of the following illnesses:		
502	Heart disease?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
503	Diabetes?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
504	Asthma?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
505	Epilepsy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
506	Malnutrition?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
507	Cancer?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 509 → 509
508	Can you specify the type or site of cancer?	TYPE/SITE ________________ ________________	
509	Tuberculosis?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
510	HIV/AIDS?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
511	Did s/he suffer from any other medically diagnosed illness?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 601 → 601
512	Can you specify the illness?	ILLNESS ________________ ________________	

DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

SECTION 6. HISTORY OF INJURIES/ACCIDENTS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Did s/he suffer from any injury or accident that led to her/his death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 604 → 604
602	What kind of injury or accident did the deceased suffer?	ROAD TRAFFIC ACCIDENT . . . 1 FALL . . . 2 DROWNING . . . 3 POISONING . . . 4 BURNS . . . 5 VIOLENCE/ASSAULT . . . 7 OTHER ______ 6 (SPECIFY) DON'T KNOW . . . 8	
603	Was the injury or accident intentionally inflicted by someone else?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
604	CHECK QUESTION 304 FOR AGE AT DEATH: 10 YEARS OR OLDER ☐ ↓ UNDER 10 YEARS ☐ →		606
605	Do you think that s/he committed suicide?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
606	Did s/he suffer from any animal/insect bite that led to her/his death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 608 → 608
607	What type of animal/insect?	DOG . . . 1 SNAKE . . . 2 INSECT . . . 3 OTHER ______ 6 (SPECIFY) DON'T KNOW . . . 8	
608	CHECK Q.304: UNDER ONE YEAR ☐ ↓ ONE YEAR OR OLDER ☐ →		801

SECTION 7. SYMPTOMS AND SIGNS NOTED DURING THE FINAL ILLNESS OF INFANTS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Was the child small at birth?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
702	Was the child born prematurely?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 704 → 704
703	How many months or weeks premature? INDICATE PERIOD OF PREGNANCY	WEEKS . . . 1 ☐☐ MONTHS . . . 2 ☐☐ DON'T KNOW . . . 9 9 8	
704	Was the child growing normally?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
705	Did the child have bulging of the fontanelle?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 801 → 801
706	For how many days before death did s/he have the bulging?	DAYS . . . ☐☐ DON'T KNOW . . . 9 8	

SECTION 8. STATUS OF MOTHER AND SYMPTOMS NOTED DURING THE FINAL ILLNESS FOR ALL CHILDREN

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	How is the mother's health now?	HEALTHY . . . 1 ILL . . . 2 NOT ALIVE . . . 3 DON'T KNOW . . . 8	
802	For how long was the child ill before s/he died?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
803	Did s/he have a fever?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 808 → 808
804	For how long did s/he have a fever?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
805	Was the fever severe?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
806	Was the fever continuous or on and off?	CONTINUOUS . . . 1 ON AND OFF . . . 2 DON'T KNOW . . . 8	
807	Did s/he have chills/rigor?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
808	Did s/he have a cough?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 812 → 812
809	For how long did s/he have a cough?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
810	Was the cough severe?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
811	Did the child vomit after he/she coughed?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
812	Did s/he have fast breathing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 818 → 818
813	For how long did s/he have fast breathing?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
814	Did s/he have difficulty in breathing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 820 → 820
815	For how long did s/he have difficulty in breathing?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
816	Did s/he have chest indrawing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 818 → 818

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
817	For how long did s/he have chest indrawing?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
818	Did s/he have noisy breathing (grunting or wheezing)? DEMONSTRATE	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
819	Did s/he have flaring of the nostrils?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
820	Did s/he have diarrhoea?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 824 → 824
821	For how long did s/he have diarrhoea?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
822	When the diarrhoea was most severe, how many times did s/he pass stool in a day?	NUMBER OF TIMES . . . . [ ][ ] DON'T KNOW 9 8	
823	At any time during the final illness was there blood in the stool?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
824	Did s/he vomit?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 827 → 827
825	For how long did s/he vomit?	DAYS . . . . [ ][ ] DON'T KNOW 9 8	
826	When the vomiting was most severe, how many times did s/he vomit in a day?	NUMBER OF TIMES . . . . [ ][ ] DON'T KNOW 9 8	
827	Did s/he have abdominal pain?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 830 → 830
828	For how long did s/he have abdominal pain?	DAYS . . . . 1 [ ][ ] MONTHS . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
829	Was the abdominal pain severe?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
830	Did s/he have abdominal distension?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 834 → 834
831	For how long did s/he have abdominal distension?	DAYS . . . . 1 [ ][ ] MONTHS . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
832	Did the distension develop rapidly within days or gradually over months?	RAPIDLY WITHIN DAYS . . . . 1 GRADUALLY OVER MONTHS . . . . 2 DON'T KNOW 8	
833	Was there a period of a day or longer during which s/he did not pass any stool?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
834	Did s/he have any mass in the abdomen?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 836 → 836
835	For how long did s/he have the mass in the abdomen?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
836	Did s/he have headache?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 839 → 839
837	For how long did s/he have headache?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
838	Was the headache severe?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
839	Did s/he have a stiff or painful neck?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 841 → 841
840	For how long did s/he have a stiff or painful neck?	DAYS . . . DON'T KNOW . . . 9 8	
841	Did s/he become unconscious?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 844 → 844
842	For how long was s/he unconscious?	DAYS . . . DON'T KNOW . . . 9 8	
843	Did the unconsciousness start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
844	Did s/he have convulsions?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 846 → 846
845	For how long did s/he have convulsions?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
846	Did s/he have paralysis of the lower limbs?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 849 → 849
847	How long did s/he have paralysis of the lower limbs?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
848	Did the paralysis of the lower limbs start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
849	Was there any change in the amount of urine s/he passed daily?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 852 → 852

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
850	For how long did s/he have the change in the amount of urine s/he passed daily?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
851	How much urine did s/he pass?	TOO MUCH . . . 1 TOO LITTLE . . . 2 NO URINE AT ALL . . . 3 DON'T KNOW . . . 8	
852	During the illness that led to death, did s/he have any skin rash?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 856 → 856
853	For how long did s/he have the skin rash?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
854	Was the rash located on: 1 The face? 2 The trunk? 3 On the arms and legs? 4 Any other place?	YES NO DK FACE . . . 1 2 8 TRUNK . . . 1 2 8 ARMS AND LEGS . . . 1 2 8 OTHER PLACE . . . 1 2 8 SPECIFY: ____________ (SPECIFY)	
855	What did the rash look like?	MEASLES RASH . . . 1 RASH WITH CLEAR FLUID . . . 2 RASH WITH PUS . . . 3 DON'T KNOW . . . 8	
856	Did s/he have red eyes?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
857	Did s/he have bleeding from the nose, mouth, or anus?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
858	Did s/he have weight loss?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 861 → 861
859	For how long before death did s/he have the weight loss?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
860	Did s/he look very thin and wasted?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
861	Did s/he have mouth sores or white patches in the mouth or on the tongue?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 863 → 863
862	For how long did s/he have mouth sores or white patches in the mouth or on the tongue?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
863	Did s/he have any swelling?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 866 → 866
864	For how long did s/he have the swelling?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
865	Was the swelling on: 1 The face? 2 The joints? 3 The ankles? 4 The whole body? 5 Any other place?	YES NO DK FACE . . . . . 1 2 8 JOINTS . . . . . 1 2 8 ANKLES . . . . . 1 2 8 WHOLE BODY . . . . . 1 2 8 OTHER PLACE . . . . . 1 2 8 SPECIFY:________	
866	Did s/he have any lumps?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 869 → 869
867	For how long did s/he have the lumps?	DAYS . . . . . 1 [ ][ ] MONTHS . . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
868	Were the lumps on: 1 The neck? 2 The armpit? 3 The groin? 4 Any other place?	YES NO DK NECK . . . . . 1 2 8 ARMPIT . . . . . 1 2 8 GROIN . . . . . 1 2 8 OTHER PLACE . . . . . 1 2 8 SPECIFY:________	
869	Did s/he have yellow discoloration of the eyes?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 871 → 871
870	For how long did s/he have the yellow discoloration of the eyes?	DAYS . . . . . 1 [ ][ ] MONTHS . . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
871	Did her/his hair color change to reddish or yellowish?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 873 → 873
872	For how long did s/he have reddish/yellowish hair?	DAYS . . . . . 1 [ ][ ] MONTHS . . . . . 2 [ ][ ] DON'T KNOW 9 9 8	
873	Did s/he look pale (thinning/lack of blood) or have pale palms, eyes or nail beds?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 875 → 875
874	For how long did s/he look pale (thinning/lack of blood) or have pale palms, eyes, or nail beds?	DAYS . . . . . [ ][ ] DON'T KNOW 9 8	
875	Did s/he have sunken eyes?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 901 → 901
876	For how long did s/he have sunken eyes?	DAYS . . . . . [ ][ ] DON'T KNOW 9 8	

SECTION 9. TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Was s/he vaccinated for measles?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
902	Did s/he receive any treatment for the illness that led to death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →909 →909
903	Can you please list the drugs s/he was given for the ilness that led to death? COPY FROM PRESCRIPTION/DISCHARGE NOTES IF AVAILABLE	____________ ____________ ____________	
904	What type of treatment did s/he receive: 1 Oral rehydration salts and/or intravenous fluids (drip) treatment? 2 Blood transfusion? 3 Treatment/food through a tube passed through the nose? 4 Any other treatment?	YES NO DK ORS/DRIP TREATMENT . . . 1 2 8 BLOOD TRANSFUSION . . . 1 2 8 THROUGH THE NOSE . . . 1 2 8 OTHER ____________ 1 2 8 (SPECIFY)	
905	Where did (NAME) receive treatment for the illness that led to his/her death? PROBE: Any where else? CIRCLE ALL PLACES MENTIONED. PROBE TO IDENTIFY THE TYPE OF HEALTH FACILITY AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HEALTH FACILITY IS PUBLIC OR PRIVATE , WRITE THE NAME OF THE PLACE ____________ (NAME OF PLACE)	HOME RESPONDENT'S HOME . . . A OTHER HOME . . . B PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT) . . . C CHC/POLYCLINIC . . . D BASIC HEALTH CENTER . . . E HEALTH POST/SUB-HEALTH POST . . . F MOBILE CLINIC . . . G OTHER PUBLIC ____________ H (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . I PRIVATE CLINIC . . . J PRIVATE DOCTOR'S OFFICE . . . K OTHER PRIVATE ____________ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . M REFUGEE CAMP . . . N OTHER ____________ X (SPECIFY)	
905A	CHECK Q.905: CODE C TO N CIRCLED ☐ ↓	OTHER CODE CIRCLED ☐ →	909
906	In the month before death, how many times in total did s/he receive treatment from this/these facilities?	NUMBER OF TIMES . . . ☐☐ DON'T KNOW . . . 9 8	
907	Did a health care worker tell you the cause of death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →909 →909
908	What did the health care worker say?	____________ ____________ ____________	
909	Did s/he have any operation for the illness?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1001 →1001
910	How many days before death did s/he have the operation?	DAYS . . . ☐☐ DON'T KNOW . . . 9 8	
911	On what part of the body was the operation?	ABDOMEN . . . 1 CHEST . . . 2 HEAD . . . 3 OTHER ____________ 6 (SPECIFY) DON'T KNOW . . . 8	

SECTION 10. DATA ABSTRACTED FROM DEATH CERTIFICATE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Do you have a death certifcate for the deceased?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	 → 1101 → 1101
1002	Can I see the death certificate? COPY DAY, MONTH AND YEAR OF DEATH FROM THE DEATH CERTIFICATE.	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]	
1003	COPY DAY, MONTH AND YEAR OF ISSUE OF DEATH CERTIFICATE.	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]	
1004	RECORD THE CAUSE OF DEATH FROM THE FIRST (TOP) LINE OF THE DEATH CERTIFICATE: ____________________		
1005	RECORD THE CAUSE OF DEATH FROM THE SECOND LINE OF THE DEATH CERTIFICATE (IF ANY): ____________________		
1006	RECORD THE CAUSE OF DEATH FROM THE THIRD LINE OF THE DEATH CERTIFICATE (IF ANY): ____________________		
1007	RECORD THE CAUSE OF DEATH FROM THE FOURTH LINE OF THE DEATH CERTIFICATE (IF ANY): ____________________		

DEATH OF A CHILD AGED 29 DAYS TO 11 YEARS

SECTION 11. DATA ABSTRACTED FROM OTHER HEALTH RECORDS

1101	OTHER HEALTH RECORDS AVAILABLE	YES . . . . 1 NO 2	 → 1111
1102	FOR EACH TYPE OF HEALTH RECORD SUMMARIZE DETAILS FOR LAST 2 VISITS (IF MORE THAN 2) AND RECORD DATE OF ISSUE		
1103	BURIAL PERMIT (CAUSE OF DEATH) ____________		
1104	POST MORTEM RESULTS (CAUSE OF DEATH) ____________		
1105	MCH/ANC CARD (RELEVANT INFORMATION) ____________		
1106	HOSPITAL PRESCRIPTION (RELEVANT INFORMATION) ____________		
1107	TREATMENT CARDS (RELEVANT INFORMATION) ____________		
1108	HOSPITAL DISCHARGE (RELEVANT INFORMATION) ____________		
1109	LABORATORY RESULTS (RELEVANT INFORMATION) ____________		
1110	OTHER HOSPITAL DOCUMENTS SPECIFY: ____________		
1111	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENING HOURS . . . . MINUTES	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: ____________________ DATE: ____________________

April 14 2010

AFGHANISTAN MORTALITY SURVEY
VERBAL AUTOPSY [FORM 3]
DEATH OF AN ADULT AGED 12 YEARS AND ABOVE

THE MINISTRY OF PUBLIC HEALTH

IDENTIFICATION

VILLAGE / NEIGHBORHOOD [MUQATAA / MAHALAH] ______________

NAME OF HOUSEHOLD HEAD ______________

CLUSTER NUMBER [SAHA SHOMOR]

STRUCTURE NUMBER

HOUSEHOLD NUMBER

NAME, LINE NUMBER OF RESPONDENT FROM Q.101 AND Q.102 IN HQ ______________

NAME, COLUMN NUMBER OF DECEASED FROM Q.303 AND Q.304 IN HQ ______________

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	______	______	______	DAY MONTH YEAR
INTERVIEWER'S NAME	______	______	______	INT. NUMBER
RESULT*	______	______	______	RESULT
NEXT VISIT: DATE	______	______		TOTAL NUMBER OF VISITS
TIME	______	______		

*RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 POSTPONED
4 REFUSED
5 PARTLY COMPLETED
7 INCAPACITATED
6 OTHER ______________
(SPECIFY)

LANGUAGE OF INTERVIEW

LANGUAGE OF QUESTIONNAIRE: ☐ LANGUAGE OF INTERVIEW: ☐ LANGUAGE OF RESPONDENT ☐

LANGUAGE CODES: PASHTU = 1, DARI = 2, OTHER = 3, OTHER = 4

TRANSLATOR USED: (YES = 1, NO = 2) ☐

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME ______	NAME ______		

Introduction and Consent

Hello. My name is______________________and I am working with the Ministry of Public Health.
We are conducting a survey about health all over Afghanistan.
Your household was selected for the survey. The questions usually take about 30 to 45 minutes.

We are collecting information on the causes of death in the community. This information will help the government to plan health services. We would very much appreciate your participation in this survey. We learned during our earlier visit that (NAME) had died recently. As part of the survey we want to ask you about the circumstances leading to the death of the deceased. Whatever information you provide wil be kept strictly confidential. No information identifying you or the deceased will ever be released to anyone outside of this survey.

Participation in this survey is voluntary and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your answers will help the government improve health services for Afghans.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: ______________________________ Date: ______________________

RESPONDENT AGREES TO BE INTERVIEWED 1 ↓   RESPONDENT DOES NOT AGREE TO BE INTERVIEWED 2 → END

DEATH OF AN ADULT AGED 12 YEARS AND ABOVE

SECTION 2. BASIC INFORMATION ABOUT RESPONDENT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENING HOUR .... MINUTES	
202	What is your relationship to the deceased?	FATHER .... 1 MOTHER .... 2 SPOUSE 3 SIBLING .... 4 OTHER RELATIVE ______ 6 (SPECIFY) NO RELATION 8	
203	Did you live with the deceased in the period leading to her/his death?	YES .... 1 NO 2	

SECTION 3. INFORMATION ON THE DECEASED AND DATE/PLACE OF DEATH

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	What was the name of the deceased?	______ (NAME)	
302	Was (NAME) male or female?	MALE .... 1 FEMALE 2	
303	When was (NAME) born? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY .... MONTH .... YEAR	
304	How old was (NAME) when s/he died?	AGE IN YEARS	
305	When did s/he die? RECORD '98' IF DON'T KNOW DAY OR MONTH RECORD '9998' IF DON'T KNOW YEAR	DAY .... MONTH .... YEAR	
305A	CHECK 305: DIED 1 HAMMAL 1386 OR AFTER ☐	DIED EARLIER THAN 1 HAMMAL 1386 ☐	END
305B	CHECK 304: AGE AT DEATH 12 YEARS AND ABOVE ☐	AGE AT DEATH 28 DAYS OR LESS ☐ AGE AT DEATH 29 DAYS TO 11 YEARS ☐	USE VA USE VA FORM 2
306	What was her/his occupation, that is, what kind of work did s/he mainly do?	______ ______ ______	
307	What is the highest level of school s/he attended: primary, secondary, higher or madrassa?	NONE .... 1 PRIMARY .... 2 SECONDARY .... 3 HIGHER .... 4 MADRASSA .... 5 DON'T KNOW 8	
308	What was her/his marital status?	NEVER MARRIED .... 1 MARRIED .... 2 WIDOWED .... 3 DIVORCED .... 4 SEPARATED .... 5 DON'T KNOW 8	
309	Where did s/he die?	HOSPITAL .... 1 OTHER HEALTH FACILITY .... 2 HOME .... 3 OTHER ______ 6 (SPECIFY) DON'T KNOW 8	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 4. RESPONDENT'S ACCOUNT OF ILLNESS/EVENTS LEADING TO DEATH

401	Could you tell me about the illness/events that led to her his/death?
402	CAUSE OF DEATH 1 ACCORDING TO RESPONDENT
403	CAUSE OF DEATH 2 ACCORDING TO RESPONDENT

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 5. HISTORY OF PREVIOUSLY KNOWN MEDICAL CONDITIONS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	I would like to ask you some questions concerning previously known medical conditions the deceased had; injuries and accidents that the deceased suffered; and signs and symptoms that the deceased had/showed when s/he was ill. Some of these questions may not appear to be directly related to his/her death. Please bear with me and answer all the questions. They will help us to get a clear picture of all possible symptoms that the deceased had. Please tell me if the deceased suffered from any of the following illnesses:		
502	High blood pressure?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
503	Diabetes?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
504	Asthma?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
505	Epilepsy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
506	Malnutrition?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
507	Cancer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 509 → 509
508	Can you specify the type or site of cancer?	TYPE/SITE ______________ ______________	
509	Tuberculosis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
510	HIV/AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
511	Did s/he suffer from any other medically diagnosed illness?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 601 → 601
512	Can you specify the illness?	ILLNESS ______________ ______________	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 6. HISTORY OF INJURIES/ACCIDENTS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Did s/he suffer from any injury or accident that led to her/his death?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 604 → 604
602	What kind of injury or accident did the deceased suffer?	ROAD TRAFFIC ACCIDENT . . . . . 1 FALL . . . . . 2 DROWNING . . . . . 3 POISONING . . . . . 4 BURNS . . . . . 5 VIOLENCE/ASSAULT . . . . . 7 OTHER ______ 6 (SPECIFY) DON'T KNOW 8	
603	Was the injury or accident intentionally inflicted by someone else?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
604	Do you think that s/he committed suicide?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
605	Did s/he suffer from any animal/insect bite that led to her/his death?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 607 → 607
606	What type of animal/insect?	DOG . . . . . 1 SNAKE . . . . . 2 INSECT . . . . . 3 OTHER ______ 6 (SPECIFY) DON'T KNOW 8	
607	CHECK Q.302: FEMALE ☐ ↓	MALE ☐	→ 901

SECTION 7. SYMPTOMS AND SIGNS ASSOCIATED WITH ILLNESS OF WOMEN

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Did she have an ulcer or swelling in the breast?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 703 → 703
702	For how long did she have an ulcer or swelling in the breast?	DAYS . . . . . 1 ☐☐ MONTHS . . . . . 2 ☐☐ DON'T KNOW 9 9 8	
703	Did she have excessive vaginal bleeding during menstrual periods?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 705 → 705
704	For how long did s/he have the excessive vaginal bleeding during menstrual periods?	DAYS . . . . . 1 ☐☐ MONTHS . . . . . 2 ☐☐ DON'T KNOW 998	
705	Did she have vaginal bleeding in between menstrual periods?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 707 → 707
706	For how long did she have vaginal bleeding in between menstrual periods?	DAYS . . . . . 1 ☐☐ MONTHS . . . . . 2 ☐☐ DON'T KNOW 998	
707	Did she have abnormal vaginal discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 801 → 801
708	For how long did she have abnormal vaginal discharge?	DAYS . . . . . 1 ☐☐ MONTHS . . . . . 2 ☐☐ DON'T KNOW 998	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 8. SYMPTOMS AND SIGNS ASSOCIATED WITH PREGNANCY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801A	CHECK Q.304: AGE AT DEATH 12-49 ☐ ↓ AGE AT DEATH LESS THAN 12 OR 50 AND ABOVE ☐ → 901		901
801	Was she pregnant at the time of death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 806 → 806
802	How long was she pregnant?	WEEKS . . . 1 ☐☐ MONTHS . . . 2 ☐☐ DON'T KNOW . . . 9 9 8	
803	How many pregnancies had she had, including this one?	PREGNANCIES . . . ☐☐ DON'T KNOW . . . 9 8	
804	During the last 3 months of pregnancy, did she suffer from any of the following illnesses: 1 Vaginal bleeding? 2 Smelly vaginal discharge? 3 Puffy face? 4 Headache? 5 Blurred vision? 6 Convulsion? 7 Febrile illness? 8 Severe abdominal pain that was not labor pain? 9 Pallor and shortness of breath (both present)? 10 Did she suffer from any other illness?	YES NO DK VAGINAL BLEEDING . . . 1 2 8 SMELLY VAGINAL DISCHARGE . . . 1 2 8 PUFFY FACE . . . 1 2 8 HEADACHE . . . 1 2 8 BLURRED VISION . . . 1 2 8 CONVULSION . . . 1 2 8 FEBRILE ILLNESS . . . 1 2 8 SEVERE ABDOMINAL PAIN (NOT LABOR PAIN) . . . 1 2 8 PALLOR/SHORTNESS OF BREATH (BOTH) . . . 1 2 8 OTHER ______ (SPECIFY) 1 2 8	
805	Did she die during labor, but undelivered?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
806	Did she give birth recently?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 818 → 818
807	How many days after giving birth did she die?	DAYS . . . ☐☐ DON'T KNOW . . . 9 8	
808	Was there excessive bleeding on the day labor started?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
809	Was there excessive bleeding during labor before delivering the baby?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
810	Was there excessive bleeding after delivering the baby?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
811	Did she have difficulty in delivering the placenta?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
812	Was she in labor for unusually long (more than 24 hours)?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
813	Was it a normal vaginal delivery?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	→ 815 → 815
814	What type of delivery was it?	FORCEPS/VACUUM . . . 1 CAESAREAN SECTION . . . 2 OTHER ______ 6 (SPECIFY) DON'T KNOW . . . 8	
815	Did she have foul smelling vaginal discharge?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 8. SYMPTOMS AND SIGNS ASSOCIATED WITH PREGNANCY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816	Where did she give birth? PROBE TO IDENTIFY THE TYPE OF HEALTH FACILITY AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HEALTH FACILITY IS PUBLIC OR PRIVATE , WRITE THE NAME OF THE PLACE __________________ (NAME OF PLACE)	HOME RESPONDENT'S HOME . . . . . 01 OTHER HOME . . . . . 02 PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT . . . . . 03 CHC/POLYCLINIC . . . . . 04 BASIC HEALTH CENTER . . . . . 05 OTHER PUBLIC __________ 06 (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . . . 07 PRIVATE CLINIC . . . . . 08 PRIVATE DOCTOR'S OFFICE . . . . . 09 OTHER PRIVATE __________ 10 (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . . . 11 REFUGEE CAMP . . . . . 12 OTHER __________ 96 (SPECIFY)	
817	Who assisted with the delivery? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT DURING THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . . . . B OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . . . . C COMMUNITY HEALTH WORKER . . . . . D RELATIVE/FRIEND . . . . . E OTHER __________ X (SPECIFY) NO ONE . . . . . Y	
818	Did she experience an abortion recently?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 901 → 901
819	Did she die during the abortion?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 821 → 821
820	How many days before death did she have the abortion?	DAYS . . . . . [ ][ ] DON'T KNOW 9 8	
821	How many months pregnant was she when she had the abortion?	MONTHS . . . . . [ ][ ] DON'T KNOW 9 8	
822	Did she have heavy bleeding after the abortion?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
823	Did the abortion occur by itself, spontaneously?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 901 → 901
824	Did she take medicine or treatment to induce?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	For how long was s/he ill before s/he died?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
902	Did s/he have a fever?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 907 → 907
903	For how long did s/he have a fever?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
904	Was the fever continuous or on and off?	CONTINUOUS . . . 1 ON AND OFF . . . 2 DON'T KNOW . . . 8	
905	Did s/he have fever only at night?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
906	Did s/he have chills/rigor?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
907	Did s/he have a cough?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 913 → 913
908	For how long did s/he have a cough?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
909	Was the cough severe?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
910	Was the cough productive with sputum?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
911	Did s/he cough out blood?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
912	Did s/he have night sweats?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
913	Did s/he have breathlessness?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 918 → 918
914	For how long did s/he have breathlessness?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
915	Was s/he unable to carry out daily routines due to breathlessness?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
916	Was s/he breathless while lying flat?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
917	Did s/he have wheezing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
918	Did s/he have chest pain?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 928 → 928
919	For how long did s/he have chest pain?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
920	Did chest pain start suddenly or gradually?	SUDDENLY . . . 1 GRADUALLY . . . 2 DON'T KNOW . . . 8	
921	When s/he had severe chest pain, how long did it last?	LESS THAN HALF AN HOUR . . . 1 HALF AN HOUR TO 24 HOURS . . . 2 LONGER THAN 24 HOURS . . . 3 DON'T KNOW . . . 8	
922	Was the chest pain located below the breastbone (sternum)?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
923	Was the chest pain located over the heart and did it spread to the left arm?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
924	Was the chest pain located over the ribs (sides)?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
925	Was the chest pain continuous or on and off?	CONTINUOUS . . . 1 ON AND OFF . . . 2 DON'T KNOW . . . 8	
926	Did the chest pain get worse while coughing?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
927	Did s/he have palpitations?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
928	Did s/he have diarrhoea?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 933 → 933
929	For how long did s/he have diarrhoea?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
930	Was the diarrhoea continuous or on and off?	CONTINUOUS . . . 1 ON AND OFF . . . 2 DON'T KNOW . . . 8	
931	At any time during the final illness was there blood in the stool?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
932	When the diarrhoea was most severe, how many times did s/he pass stools in a day?	NUMBER OF TIMES . . . [ ][ ] DON'T KNOW . . . 9 8	
933	Did s/he vomit?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 937 → 937
934	For how long did s/he vomit?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
935	Did the vomit look like a coffee-colored fluid or bright red/blood red or some other?	COFFEE-COLORED FLUID . . . 1 BRIGHT RED/BLOOD RED . . . 2 OTHER ______ 6 (SPECIFY) DON'T KNOW . . . 8	
936	When the vomiting was most severe, how many times did s/he vomit in a day?	NUMBER OF TIMES . . . [ ][ ] DON'T KNOW . . . 9 8	
937	CHECK QUESTION 302 FOR SEX OF THE DECEASED: FEMALE [ ] ↓ MALE [ ] →		939
938	CHECK QUESTIONS 801, 805, 819 TO SEE IF SHE DIED DURING PREGNANCY, LABOR, ABORTION OR POSTPARTUM: NO [ ] ↓ YES [ ] →		948
939	Did s/he have abdominal pain?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 941 → 941
940	For how long did s/he have abdominal pain?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
941	Did s/he have abdominal distension?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 945 → 945
942	For how long did s/he have abdominal distension?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
943	Did the distension develop rapidly within days or gradually over months?	RAPIDLY WITHIN DAYS . . . 1 GRADUALLY OVER MONTHS . . . 2 DON'T KNOW . . . 8	
944	Was there a period of a day or longer during which s/he did not pass any stool?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
945	Did s/he have any mass in the abdomen?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 948 → 948
946	For how long did s/he have the mass in the abdomen?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
947	Where in the abdomen was the mass located?	RIGHT UPPER ABDOMEN . . . 1 LEFT UPPER ABDOMEN . . . 2 LOWER ABDOMEN . . . 3 ALL OVER ABDOMEN . . . 4 DON'T KNOW . . . 8	
948	Did s/he have difficulty or pain while swallowing solids?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 950 → 950
949	For how long did s/he have difficulty or pain while swallowing solids?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
950	Did s/he have difficulty or pain while swallowing liquids?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 952 → 952
951	For how long did s/he have difficulty or pain while swallowing liquids?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
952	Did s/he have headache?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 955 → 955
953	For how long did s/he have headache?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
954	Was the headache severe?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
955	Did s/he have a stiff or painful neck?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 957 → 957
956	For how long did s/he have a stiff or painful neck?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
957	Did s/he have mental confusion?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 960 → 960
958	For how long did s/he have mental confusion?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
959	Did the mental confusion start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
960	Did s/he become unconscious?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 963 → 963
961	For how long was s/he unconscious?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
962	Did the unconsciousness start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
963	Did s/he have convulsions?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 965 → 965
964	For how long did s/he have convulsions?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
965	Was s/he unable to open the mouth?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 967 → 967
966	For how long was s/he unable to open the mouth?	DAYS . . . DON'T KNOW . . . 9 8	
967	Did s/he have stiffness of the whole body?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 969 → 969
968	For how long did s/he have stiffness of the whole body?	DAYS . . . DON'T KNOW . . . 98	
969	Did s/he have paralysis of one side of the body?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 972 → 972
970	For how long did s/he have paralysis of one side of the body?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
971	Did the paralysis of one side of the body start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
972	Did s/he have paralysis of the lower limbs?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 975 → 975
973	How long did s/he have paralysis of the lower limbs?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
974	Did the paralysis of the lower limbs start suddenly, quickly within a single day, or slowly over many days?	SUDDENLY . . . 1 FAST (IN A DAY) . . . 2 SLOWLY (MANY DAYS) . . . 3 DON'T KNOW . . . 8	
975	Was there any change in color of urine?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 977 → 977
976	For how long did s/he have the change in color of urine?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
977	During the final illness did s/he ever pass blood in the urine?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 979 → 979
978	For how long did s/he pass blood in the urine?	DAYS . . . 1 MONTHS . . . 2 DON'T KNOW . . . 9 9 8	
979	Was there any change in the amount of urine s/he passed daily?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 982 → 982

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
980	For how long did s/he have the change in the amount of urine passed daily?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
981	How much urine did s/he pass?	TOO MUCH . . . 1 TOO LITTLE . . . 2 NO URINE AT ALL . . . 3 DON'T KNOW . . . 8	
982	During the illness that led to death, did s/he have any skin rash?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 986 → 986
983	For how long did s/he have the skin rash?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
984	Was the rash located on: 1 The face? 2 The trunk? 3 On the arms and legs? 4 Any other place?	YES NO DK FACE . . . 1 2 8 TRUNK . . . 1 2 8 ARMS AND LEGS . . . 1 2 8 OTHER PLACE . . . 1 2 8 SPECIFY: ______ (SPECIFY)	
985	What did the rash look like?	MEASLES RASH . . . 1 RASH WITH CLEAR FLUID . . . 2 RASH WITH PUS . . . 3 DON'T KNOW . . . 8	
986	Did s/he have red eyes?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
987	Did s/he have bleeding from the nose, mouth, or anus?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
988	Did s/he ever have shingles/herpes zoster?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
989	Did s/he have weight loss?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 990 → 990
989A	For how long before death did s/he have the weight loss?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
989B	Did s/he look very thin and wasted?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	
990	Did s/he have mouth sores or white patches in the mouth or on the tongue?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 991 → 991
990A	For how long did s/he have mouth sores or white patches in the mouth or on the tongue?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
991	Did s/he have any swelling?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 992 → 992

SECTION 9. SIGNS AND SYMPTOMS NOTED DURING THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
991A	For how long did s/he have the swelling?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
991B	Was the swelling on: 1 The face? 2 The joints? 3 The ankles? 4 The whole body? 5 Any other place?	YES NO DK FACE . . . 1 2 8 JOINTS . . . 1 2 8 ANKLES . . . 1 2 8 WHOLE BODY . . . 1 2 8 OTHER PLACE . . . 1 2 8 SPECIFY: ______	
992	Did s/he have any lumps?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 993 → 993
992A	For how long did s/he have the lumps?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
992B	Were the lumps on: 1 The neck? 2 The armpit? 3 The groin? 4 Any other place?	YES NO DK NECK . . . 1 2 8 ARMPIT . . . 1 2 8 GROIN . . . 1 2 8 OTHER PLACE . . . 1 2 8 SPECIFY: ______	
993	Did s/he have yellow discoloration of the eyes?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 994 → 994
993A	For how long did s/he have the yellow discoloration of the eyes?	DAYS . . . 1 [ ][ ] MONTHS . . . 2 [ ][ ] DON'T KNOW . . . 9 9 8	
994	Did s/he look pale (thinning/lack of blood) or have pale palms, eyes or nail beds?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 995 → 995
994A	For how long did s/he look pale (thinning/lack of blood) or have pale palms, eyes, or nail beds?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
995	Did s/he have an ulcer, abscess, or sore anywhere on the body?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 → 1001 → 1001
995A	For how long did s/he have the ulcer, abscess, or sore?	DAYS . . . [ ][ ] DON'T KNOW . . . 9 8	
995B	What was the location of the ulcer, abscess, or sore?	______ ______ (SPECIFY)	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 10. TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Did s/he receive any treatment for the illness that led to death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1008 →1008
1002	Can you please list the drugs s/he was given for the ilness that led to death? COPY FROM PRESCRIPTION/DISCHARGE NOTES IF AVAILABLE	______ ______ ______	
1003	What type of treatment did s/he receive: 1 Oral rehydration salts and/or intravenous fluids (drip) treatment? 2 Blood transfusion? 3 Treatment/food through a tube passed through the nose? 4 Any other treatment?	YES NO DK ORS/DRIP TREATMENT . . . 1 2 8 BLOOD TRANSFUSION . . . 1 2 8 THROUGH THE NOSE . . . 1 2 8 OTHER ______ 1 2 8 (SPECIFY)	
1004	Where did (NAME) receive treatment for the illness that led to his/her death? PROBE: Any where else? CIRCLE ALL PLACES MENTIONED. PROBE TO IDENTIFY THE TYPE OF HEALTH FACILITY AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HEALTH FACILITY IS PUBLIC OR PRIVATE , WRITE THE NAME OF THE PLACE ______ (NAME OF PLACE)	HOME RESPONDENT'S HOME . . . A OTHER HOME B PUBLIC SECTOR HOSPITAL (NATIONAL, REGIONAL, PROVINCIAL, OR DISTRICT) . . . C CHC/POLYCLINIC . . . D BASIC HEALTH CENTEF . . . E HEALTH POST/SUB-HEALTH POST . . . F MOBILE CLINIC . . . G OTHER PUBLIC ______ H (SPECIFY) PRIVATE SECTOR PVT. HOSPITAL . . . I PRIVATE CLINIC . . . J PRIVATE DOCTOR'S OFFICE . . . K OTHER PRIVATE ______ L (SPECIFY) OTHER SOURCE CHARITY/FOUNDATIONS . . . M REFUGEE CAMF . . . N OTHER ______ X (SPECIFY)	
1004A	CHECK Q.1104: CODE C TO N CIRCLED ☐ ↓	OTHER CODE CIRCLED ☐ →	1008
1005	In the month before death, how many times in total did s/he receive treatment from this/these facilities?	NUMBER OF TIMES . . . ☐☐ DON'T KNOW . . . 9 8	
1006	Did a health care worker tell you the cause of death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1008 →1008
1007	What did the health care worker say?	______ ______ ______	
1008	Did s/he have any operation for the illness?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1101 →1101
1009	How long before death did s/he have the operation?	DAYS . . . ☐☐ DON'T KNOW . . . 9 8	
1010	On what part of the body was the operation?	ABDOMEN . . . 1 CHEST . . . 2 HEAD . . . 3 OTHER ______ 6 (SPECIFY) DON'T KNOW . . . 8	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 11. RISK FACTORS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Did s/he drink alcohol?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1106 →1106
1102	How long had s/he been drinking? RECORD '00' IF LESS THAN ONE YEAR	YEARS . . . [ ][ ] DON'T KNOW . . . 9 8	
1103	How often did s/he drink alcohol?	DAILY . . . 1 FREQUENTLY (WEEKLY) . . . 2 ONCE IN A WHILE . . . 3 DON'T KNOW . . . 8	
1104	Did s/he stop drinking?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1106 →1106
1105	How long before death did s/he stop drinking? RECORD '00' IF LESS THAN ONE MONTH	MONTHS . . . [ ][ ] DON'T KNOW . . . 9 8	
1106	Did s/he smoke tobacco (cigarette, cigar, pipe etc.)?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1201 →1201
1107	How long had s/he been smoking? RECORD '00' IF LESS THAN ONE YEAR	YEARS . . . [ ][ ] DON'T KNOW . . . 9 8	
1108	How often did s/he smoke?	DAILY . . . 1 FREQUENTLY (WEEKLY) . . . 2 ONCE IN A WHILE . . . 3 DON'T KNOW . . . 8	 →1201 →1201 →1201
1109	How many cigarettes did s/he smoke daily?	NUMBER OF CIGARETTES [ ][ ] DON'T KNOW . . . 9 8	
1110	Did s/he stop smoking before death?	YES . . . 1 NO . . . 2 DON'T KNOW . . . 8	 →1201 →1201
1111	How long before death did s/he stop smoking? RECORD '00' IF LESS THAN ONE MONTH	MONTHS . . . [ ][ ] DON'T KNOW . . . 9 8	

DEATH OF A PERSON AGED 12 YEARS AND ABOVE

SECTION 12. DATA ABSTRACTED FROM DEATH CERTIFICATE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1201	Do you have a death certifcate for the deceased?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 1301 → 1301
1202	Can I see the death certificate? COPY DAY, MONTH AND YEAR OF DEATH FROM THE DEATH CERTIFICATE.	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]	
1203	COPY DAY, MONTH AND YEAR OF ISSUE OF DEATH CERTIFICATE.	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]	
1204	RECORD THE CAUSE OF DEATH FROM THE FIRST (TOP) LINE OF THE DEATH CERTIFICATE: __________		
1205	RECORD THE CAUSE OF DEATH FROM THE SECOND LINE OF THE DEATH CERTIFICATE (IF ANY): __________		
1206	RECORD THE CAUSE OF DEATH FROM THE THIRD LINE OF THE DEATH CERTIFICATE (IF ANY): __________		
1207	RECORD THE CAUSE OF DEATH FROM THE FOURTH LINE OF THE DEATH CERTIFICATE (IF ANY): __________		

SECTION 13. DATA ABSTRACTED FROM OTHER HEALTH RECORDS

1301	OTHER HEALTH RECORDS AVAILABLE	YES . . . . 1 NO 2	 → 1311
1302	FOR EACH TYPE OF HEALTH RECORD SUMMARIZE DETAILS FOR LAST 2 VISITS (IF MORE THAN 2) AND RECORD DATE OF ISSUE		
1303	BURIAL PERMIT (CAUSE OF DEATH) ______________________		
1304	POST MORTEM RESULTS (CAUSE OF DEATH) ______________________		
1305	MCH/ANC CARD (RELEVANT INFORMATION) ______________________		
1306	HOSPITAL PRESCRIPTION (RELEVANT INFORMATION) ______________________		
1307	TREATMENT CARDS (RELEVANT INFORMATION) ______________________		
1308	HOSPITAL DISCHARGE (RELEVANT INFORMATION) ______________________		
1309	LABORATORY RESULTS (RELEVANT INFORMATION) ______________________		
1310	OTHER HOSPITAL DOCUMENTS SPECIFY: ______________________		
1311	RECORD THE TIME MORNING = 1 EVENING = 2	MORNING/EVENING . . . . HOURS . . . . MINUTES	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: ______________________ DATE: ______________

18 March 2010

AFGHANISTAN MORTALITY SURVEY
GEOGRAPHIC INFORMATION SHEET

MINISTRY OF PUBLIC HEALTH

IDENTIFICATION

VILLAGE/NEIGHBORHOOD/MAHALA ______________________

CLUSTER NUMBER/SAHA SHOMOR . . . .

NAME OF RESPONDENT ______________________

CLUSTER INFORMATION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	
101	Is there cell phone signal in the center of the cluster?	YES . . . . 1 NO 2	
102	Is the main road into the cluster paved?	YES . . . . 1 NO 2	
103	Is there a police station/police post in the cluster?	YES . . . . 1 NO 2	
104	What is the largest medical facility in the cluster? CIRCLE ONLY ONE.	HOSPITAL (NATIONAL, REGIONAL PROVINCIAL OR DISTRICT . . . . 01 CHC/POLYCLINIC . . . . 02 BASIC HEALTH CENTER . . . . 03 HEALTH POST/SUB HEALTH POST . . . 04 MOBILE CLINIC . . . . 05 PRIVATE HOSPITAL . . . . 06 PRIVATE CLINIC . . . . 07 PRIVATE DOCTOR'S OFFICE . . . . 08 CHARITY FOUNDATIONS . . . . 09 REFUGEE CAMP . . . . 10 TRADITIONAL PRACTITIONER . . . . 11 OTHER ______________ 16 (SPECIFY) NO MEDICAL FACILITY 12	
105	How frequent is public transport/common transport to and from cluster?	AT LEAST ONCE A DAY . . . . 1 SEVERAL DAYS A WEEK . . . . 2 SEVERAL DAYS A MONTH . . . . 3 CERTAIN MONTHS OF THE YEAR/ SEASONAL . . . . 4 NO SCHEDULE . . . . 5 NO PUBLIC TRANSPORT 6	
106	What is the highest level of school in the cluster? CIRCLE ONLY ONE.	PRIMARY . . . . 1 SECONDARY . . . . 2 COLLEGE/UNIVERSITY . . . . 3 MADRASSA . . . . 4 NO SCHOOL 5	
107	Are the following available in the cluster today: a) Petrol for vehicles? b) Fresh meat? c) Fresh fruits/vegetables? d) Flour for bread? e) Rice? f) Firewood/cooking fuel?	YES NO PETROL 1 2 FRESH MEAT 1 2 FRUIT/VEGETABLE 1 2 FLOUR 1 2 RICE 1 2 FIREWOOD/COOKING FUEL 1 2	

DATE COMPLETED . . . .

NAME OF LISTER . . . .

DAY

MONTH

YEAR

LISTER NUMBER